

Experienced IT Consultant and Software Developer specializing in automation, machine learning, and system development. Proficient in JS-Frameworks, Python, Java, and modern frameworks, with a track record of delivering efficient and innovative solutions.

Professional Summary

- Overview** I'm Anthony Okala, an experienced IT Consultant and Software Engineer with over 10 years of expertise in automation, software and web development, machine learning, and system development for safety-critical applications. I hold a Master's degree in Computer Science from Technical University of Clausthal.
- Current Role** Currently serving as IT Consultant at DB Regio AG, I specialize in developing automation solutions using Python and UiPath, achieving 80% reduction in manual effort with a goal to reach 99% automation. I'm also the Co-Founder & CEO of ASOK Solutions Engineering SARL.
- Expertise** My expertise spans across RPA development, full-stack web development, software development, machine learning, and system architecture, with proven experience working with automotive clients like Volkswagen AG and delivering solutions for safety-critical systems and DB Regio AG by delivering automation solutions.

Core Expertise

- Process Automation** Expert in developing automation solutions using Python and UiPath, achieving significant reduction in manual effort
- RPA Development** Proficient in building and deploying RPA robots using UiPath Orchestrator, enabling seamless task automation
- Software Development** Full-stack development with Java, Python, JavaScript, TypeScript, PHP, and modern frameworks
- System Architecture** Experience in designing and implementing robust software solutions for safety-critical systems

Professional Experience

- August 2023 – Present **IT Consultant - Vehicle Technology & Planning, DB Regio AG, Halle (Saale), Germany**
- **Developed automation solutions** using **Python** and **UiPath**, achieving 80% reduction in manual effort with a goal to reach 99% automation
 - **Built and deployed RPA robots** using **UiPath Orchestrator**, enabling seamless task automation and improving team productivity
 - **Collaborated with cross-functional teams** to design and implement robust software solutions, improving system efficiency and client satisfaction
 - **Utilized Agile (SCRUM)** to manage and deliver projects on time, ensuring continuous improvement and client alignment
 - **Employed version control** with **Git** and **GitLab**, ensuring smooth collaboration and code integrity
 - **Leveraged VBA (Visual Basic for Applications)** to **automate complex and time-consuming Excel processes**, significantly improving efficiency and accuracy
- August 2021 – August 2023 **Software Developer, Achelos GmbH, Paderborn, Germany**
- **Developed tools** in **Java** and **C++** to manage virtual machine connections, automating configuration, file upload, and data processing tasks
 - **Integrated JUnit** for **unit and integration testing**, improving code quality and reducing bugs in production
 - **Collaborated in an Agile environment**, using **JIRA** for issue tracking and sprint planning to meet project deadlines efficiently
 - **Streamlined development workflows** with **Jenkins** and **Maven** for automated build, testing, deployment, and CI/CD pipelines
 - **Managed package dependencies** using **Maven-Nexus** for efficient artifact storage and distribution
 - **Utilized Git** and **GitLab** for version control and source code management, with occasional use of **Sourcetree** for enhanced git workflow visualization
 - Proficient in **VS Code** and **Eclipse** for efficient coding, debugging, and project management across various programming languages
 - Fostered team communication and collaboration through **MS Teams**, ensuring smooth project communication and coordination
- August 2021 – June 2022 **RPA Developer, DB Regio AG, Halle (Saale), Germany**
- **Automated data processing tasks** using **Python** and **VBA Excel**, cutting processing time by at least 30%
 - **Developed and deployed RPA robots** with **UiPath**, streamlining business workflows and improving task accuracy and efficiency
 - **Worked with Agile methodologies (SCRUM)** to manage automation tasks, ensuring timely delivery and client satisfaction
 - **Collaborated remotely** with teams via **MS Teams** and **GitLab** to ensure smooth communication and version control

June 2018 – February 2021 **Working Student - Software Developer**, *Eves-IT*, Brunswick, Lower-Saxony, Germany

- **Developed tools** in **Java**, **Spring MVC**, **Spring Boot** and **JavaFX**, optimizing internal processes for automotive clients such as Volkswagen AG
- **Created database solutions** with **Oracle SQL** and **Flyway** for seamless data management across multiple systems
- **Implemented automated testing frameworks** using **JUnit** and **TDD** principles, significantly reducing bugs before and after deployment
- **Collaborated in an Agile environment**, managing development cycles using **JIRA** for task tracking, **Bitbucket** for source control management, **Bamboo** for CI/CD, **SonarQube** for QA, **Miro** for digital team kanban board, **Zoom** and **MS Teams** for remote collaboration
- **Used Confluence** for documentation, ensuring that all project details were clearly documented and easily accessible to the entire team
- **Managed project dependencies and packages** using **Maven Artifactory**, ensuring smooth version control and efficient package distribution
- **Leveraged IntelliJ IDEA and Eclipse** as integrated development environments (IDE) to improve code quality and development speed
- **Optimized client workflows** by delivering customized software solutions on time, significantly improving operational efficiency

April 2021 – 2022 **Research Assistant - Software Development and Automation**, *Technical University of Clausthal*, Clausthal-Zellerfeld, Lower-Saxony, Germany

- **Built simulation tools** using **Python** and **ROS2** for monitoring security-critical drone systems, improving system reliability and performance
- **Automated data collection and analysis** for drone control systems using **Python**, **ROS2** and **AirSim**, reducing the time required for experimental setups
- **Collaborated with international teams** to align research objectives with regulatory standards and safety protocols in the drone industry
- Collaborated remotely with local teams via **BigBlueButton (BBB)** and **GitLab** to ensure smooth communication and version control

2014 – 2018 **Research Assistant**, *Technical University of Clausthal*, Clausthal-Zellerfeld, Lower-Saxony, Germany

- **Developed and maintained software solutions** in **Java** for various research projects, automating workflows and improving the efficiency of data collection and analysis processes
- **Utilized version control systems** using **Subversion (SVN)**, ensuring seamless collaboration and traceability of code changes between multiple research teams
- **Extended MS Excel functionalities** with **VBA Excel** to support colleagues in time registration and data management
- **Designed and implemented modular applications** using the **MVC architecture pattern**, ensuring scalability and maintainability of research tools
- **Implemented automated testing** using **JUnit** to ensure software stability, reducing bugs and errors and improving the reliability of research outputs
- **Followed the V-Model XT method** for software development, adhering to structured and systematic processes to meet project requirements and quality standards
- **Collaborated with teams** using **SharePoint for documentation** and **Subversion (SVN)** for version control, streamlining code management across multiple research projects
- **Utilized Eclipse IDE** for efficient development and debugging of Java-based research applications, accelerating the development cycle
- **Automated Excel workflows** with custom VBA macros, saving significant manual effort and improving the accuracy of time registration processes for team members
- **Worked independently** to deliver high-quality software solutions that supported various research initiatives, demonstrating strong problem-solving skills and self-management

Freelance Work

- 2025 **OKAS FLD - Drive & Delivery Services**, *Business Website Project*, Halle (Saale), Germany
- Modern business website for OKAS FLD (drive & delivery services). Built with Next.js (App Router), TypeScript, and Tailwind; responsive, SEO-optimized, and i18n (DE/EN/FR)
 - Developed responsive web app using Next.js with TypeScript
 - Implemented multi-language support with i18n
 - Created mobile-first design with Tailwind CSS and custom components
 - Implemented modern development practices and architecture
 - Handled full-stack deployment and DevOps workflows
 - Deployed via GitHub → Docker Hub → Render.com with AWS Route 53 DNS management
- 2024 **ASOK-SE - Enterprise Web Application**, *ASOK-SE SARL*, Halle (Saale), Germany
- Comprehensive web application aimed at enhancing enterprise advertisement. Integrated multiple technologies to provide a seamless user experience for businesses to promote their products and services
 - Developed and optimized front-end components using HTML and CSS, ensuring cross-browser compatibility and responsiveness
 - Built robust backend services with Python/Django, handling business logic, data storage, retrieval, and processing efficiently
 - Utilized Docker for containerization, facilitating easy deployment and scalability of the application
 - Incorporated JavaScript for dynamic content updates and enhanced user interaction
- 2024 **Local Jenkins Container in VS Code Dev Container**, *Private Project*, Halle (Saale), Germany
- Professional CI/CD development environment with Jenkins configured for Django projects using VS Code Dev Containers. This setup provides a fully configured Jenkins environment with Docker support
 - Containerized Jenkins environment with Docker-in-Docker support
 - Complete Python/Django development tooling
 - Built-in security scanning (Trivy, Bandit)
 - Integrated testing suite (pytest, pytest-django, pytest-cov)
 - Code quality tools (flake8, black, isort)
 - Professional template for Automated CI/CD pipeline
 - VS Code integration with essential extensions
- 2023 – 2024 **Vivantes Humanitas Web Application**, *Friend's Project*, Berlin, Germany
- Django-based web application for Vivantes Humanitas e.V., enabling efficient management of volunteer registrations and activity tracking
 - Developed a Django-based web application for Vivantes Humanitas e.V., enabling efficient management of volunteer registrations and activity tracking
 - Built a responsive frontend using HTML, CSS, and JavaScript, ensuring an intuitive and user-friendly interface
 - Designed a secure backend with Django and Python, ensuring data integrity and compliance with privacy regulations

- 2021 – 2022 **Pentak SARL International - Enterprise Web Application**, *Pentak SARL International*, Halle (Saale), Germany
- Web application using Laravel/Lumen to manage business operations for a friend's company
 - Created a web application using Laravel/Lumen to manage business operations for a friend's company
 - Implemented a user interface with PHP, PHP-Blade, HTML, CSS, and JavaScript
- 2020 – 2021 **Offer Comparison Web Application**, *Own Initiative*, Halle (Saale), Germany
- Laravel/Lumen-based application to compare online offers, allowing users to make informed purchasing decisions
 - Designed and developed a Laravel/Lumen-based application to compare online offers, allowing users to make informed purchasing decisions
 - Integrated secure user authentication with Laravel/Passport, ensuring data privacy and secure access
 - Utilized SQLite and Eloquent ORM for efficient database management and dynamic data presentation
- 2019 – 2020 **Restaurant Management Application**, *Initiative with Friends*, Halle (Saale), Germany
- Laravel/Lumen-based system to streamline restaurant operations, including inventory tracking and order management
 - Built a Laravel/Lumen-based system to streamline restaurant operations, including inventory tracking and order management
 - Collaborated remotely using Zoom and managed code versions with Git/GitHub
- 2018 – 2019 **Hairstyle Business Web Application**, *Initiative with Friends*, Halle (Saale), Germany
- Express.js web application to support a friend's hairstyle business by enabling appointment booking and customer management
 - Developed an Express.js web application to support a friend's hairstyle business by enabling appointment booking and customer management
 - Created a responsive frontend with HTML, CSS, and JavaScript, ensuring compatibility across devices
- 2016 – 2017 **CSK Student Association Web Application**, *Own Initiative*, Halle (Saale), Germany
- Web application for the CSK student group at TU Clausthal, facilitating event management and communication among members
 - Led the development of a web application for the CSK student group at TU Clausthal, facilitating event management and communication among members
 - Designed a cross-platform solution using Node.js, TypeScript, and Ionic Cordova for enhanced accessibility
- 2014 – Present **Private Tutoring in Computer Science**, *Own Initiative*, Halle (Saale), Germany
- Conducted private tutoring sessions to help students master programming languages and databases, focusing on practical problem-solving and real-world application
 - Conducted private tutoring sessions to help students master programming languages like Java, C++, PHP, and Python, as well as databases such as SQL and NoSQL (Neo4j, ArangoDB)
 - Focused on practical problem-solving and real-world application of frameworks and tools to strengthen students' skills and confidence

Academic Work

- 2018 – 2024 **Master's Thesis: End-to-End Learning System for Autonomous Drone Navigation**, *Technical University of Clausthal*, Clausthal-Zellerfeld, Germany
- **Supervisors:** Prof. Dr. Andreas Rausch, Dr. Adina Aniculaesei
 - This project aimed to revolutionize autonomous drone flight by implementing a cutting-edge end-to-end (E2E) learning approach. Conducted within the AirSim simulation environment, the work achieved Level 4 autonomous navigation capabilities, integrating advanced spatial awareness, core navigation, and expanded features such as non-planar flight paths
 - Designed and implemented an autonomous drone navigation system using Python, TensorFlow, and AirSim simulation
 - Achieved level-4 navigation capabilities, including spatial awareness and non-planar movement
 - Delivered a scalable and efficient solution for drone navigation
 - Unlike traditional modular methods, the E2E system directly learns the mapping between inputs and outputs, enabling seamless and efficient navigation in complex environments
 - This innovative approach highlights a significant leap in autonomous aerial systems, setting the foundation for smarter and more adaptive drone technologies
- 2018 – 2024 **Master's Project: Safeguarding Safety-Critical Systems**, *Technical University of Clausthal*, Clausthal-Zellerfeld, Germany
- **Supervisors:** Prof. Dr. Andreas Rausch, Dr. Adina Aniculaesei
 - This project focused on analyzing safety-critical systems, with a particular emphasis on drones. As inherently safety-critical systems, drone development demands adherence to specialized methodologies, rigorous safety standards, and tailored development processes
 - Conducted an extensive literature review on safety-critical systems, focusing on unmanned aircraft systems
 - Analyzed and documented industry standards and laws for system development
 - The work primarily involved an in-depth literature review of relevant standards, laws, and safeguarding practices associated with the design and development of unmanned aircraft systems
 - By exploring the regulatory and technical frameworks, this study provides valuable insights into the processes necessary to ensure the reliability and safety of these advanced systems

- 2013 – 2018 **Bachelor's Thesis: Software Architecture Management in the Automotive Sector**, *Technical University of Clausthal*, Clausthal-Zellerfeld, Germany
- **Supervisors:** Prof. Dr. Andreas Rausch, Arthur Strasser
 - This project centers on Model-Driven Software Development (MDSD), a cutting-edge approach to achieving highly automated software creation. The primary objective was to design and develop a customized tool that supports Model-Driven Architecture (MDA), a pivotal aspect of MDSD, by generating tailored software architecture models derived from a metamodel
 - Built an eclipse standalone tool to support Model-Driven Architecture (MDA) for customized software solutions
 - Utilized Java, Eclipse, and UML to address architectural challenges in the automotive industry
 - Addressed the limitations of standardized frameworks like the Unified Modeling Language (UML)—which often lack flexibility or prove overly complex for specific architectural challenges—the tool is designed to meet the unique demands of the automotive industry
 - By automating critical development steps and delivering architecture solutions optimized for real-world needs, this work demonstrates innovation in streamlining software development processes while driving efficiency and adaptability in safety-critical industries
- 2013 – 2018 **Bachelor's Project: Smart Beer Bar System**, *Technical University of Clausthal*, Clausthal-Zellerfeld, Germany
- **Supervisors:** Benjamin Fischer, Yong Wang, Prof. Dr. Andreas Rausch
 - This project involved the development of a smart beer bar management system designed to enhance user experience and operational efficiency. The system allows users to log in, view personalized details such as beer consumption in liters, manage other users and their consumption data, and securely log out
 - Developed a cross-platform, real-time management system using C++, Qt, and SQLite, enabling seamless tracking of beer consumption, user data, and inventory
 - Implemented user authentication and role-based access controls, ensuring data security and allowing different levels of user interaction (admin, user, guest)
 - Optimized inventory management by automating consumption tracking, reducing manual efforts and providing real-time insights into stock levels and user behavior
 - Built using C++, Qt, SQLite, and developed in Eclipse and Qt Creator on Ubuntu, the project demonstrates a seamless integration of modern technologies to create a user-friendly and efficient solution

- 2013 – 2018 **Notable Project: Electric Vehicle Simulator**, *Technical University of Clausthal*, Clausthal-Zellerfeld, Germany
- **Supervisor:** Meng Zhang
 - This project focuses on developing an electric vehicle simulator to address key challenges such as range limitations and high costs associated with electric cars. The simulator enables users to simulate a trip and receive an evaluation of their driving performance upon completion
 - Designed and integrated an interactive driver-simulator module using Java and OpenDS, allowing users to simulate electric vehicle trips and receive detailed performance evaluations
 - Implemented a feedback loop to analyze energy consumption and optimize trip performance, helping to improve electric vehicle efficiency and user experience
 - Collaborated with a cross-functional team to ensure the simulator aligned with the real-world specifications of electric vehicles, enhancing the accuracy of results and simulations
 - Divided into several sub-projects, this programming internship specifically involved the implementation of a driver-simulator interaction, built using Java
- 2013 – 2018 **Notable Project: Parking Management System**, *Technical University of Clausthal*, Clausthal-Zellerfeld, Germany
- **Supervisor:** Meng Zhang
 - This project addresses the growing challenge of finding parking in crowded urban areas while contributing to the advancement of autonomous driving by automating parking management. The goal was to create a real-time parking management system that allows users to easily monitor the availability of parking spaces
 - Developed a real-time parking management application for Android, using Python, TypeScript, and Java, enabling users to find available parking spots based on sensor data and user input
 - Integrated data visualization tools for users to easily view parking availability and reservation status, improving the overall user experience
 - Streamlined communication with backend servers to ensure up-to-date and accurate parking lot status, allowing efficient management of parking resources in high-demand areas
 - The system was built using Python, TypeScript, and Java (Android), showcasing expertise in mobile development, backend services, and sensor data integration for autonomous systems
- 2013 – 2018 **Notable Project: Graph Database Comparison**, *Technical University of Clausthal*, Clausthal-Zellerfeld, Germany
- **Supervisor:** Gerrit Burmester, B.Sc.
 - This project involved a comprehensive performance comparison between two leading NoSQL graph databases: Neo4j and ArangoDB. The objective was to assess the strengths and capabilities of each database to determine which offers superior performance for graph-based data management
 - Conducted performance benchmarking between Neo4j and ArangoDB, writing Python scripts to evaluate query efficiency and scalability under various real-world scenarios
 - Analyzed and presented findings to stakeholders, providing actionable insights to optimize database selection for different types of graph-based applications
 - Developed custom testing scripts to simulate data workloads, ensuring that performance metrics were relevant to industry standards and real-world usage
 - To achieve this, I developed and executed a series of benchmark tests using a custom Python script, enabling a detailed analysis of each database's efficiency and scalability

Education

- 2018 – 2024 **Master's Degree - Master of Science in Computer Science**, *Technical University of Clausthal*, Clausthal-Zellerfeld, Germany
- **Thesis:** End-to-End Learning System for Autonomous Drone Navigation
 - **Tools:** Python, Pandas, TensorFlow, Keras, AirSim, Git, GitLab
 - **Key Achievement:** Developed an autonomous drone navigation system reaching level-4 navigation features
 - **Completed Coursework:** Automation Engineering, Embedded Systems Modeling
 - **Personal Growth:** Advanced proficiency in Python, Pandas, Keras, and Scikit-learn through academic projects
- 2013 – 2018 **Bachelor's Degree - Bachelor of Science in Computer Science**, *Technical University of Clausthal*, Clausthal-Zellerfeld, Germany
- **Thesis:** Software Architecture Management in Automotive Sector
 - **Tools:** Java, Eclipse, UML, GMF/EMF
 - **Key Achievement:** Designed and implemented a custom software architecture tool supporting Model-Driven Architecture for customized software solutions for the automotive sector, improving development efficiency in safety-critical systems
 - **Completed Coursework:** Software Engineering, Distributed Systems, Database, Embedded Systems, Logic and Verification, Software Ergonomic
 - **Personal Growth:** Proficient in Java, UML, and GMF/EMF modeling for tool development
- 2005 – 2011 **High School Diploma**, *Gymnasium*, Cameroon
- Learned the German language after graduation and obtained the highest language level certificate

Technical Skills

Programming Languages

Python	Advanced	<i>Extensive experience in automation, machine learning, data analysis (Pandas), and web development (Django)</i>
Java	Advanced	<i>Strong expertise in object-oriented programming, developing scalable applications, and working with enterprise frameworks</i>
JavaScript	Very Good	<i>Proficient in building interactive frontend applications with modern frameworks</i>
TypeScript	Good	<i>Experience in developing type-safe, scalable applications for large projects</i>
PHP	Advanced	<i>Hands-on experience with Laravel/Lumen for backend development and RESTful API creation</i>
C++	Advanced	<i>Proficient in building high-performance applications, system-level programming, and algorithm implementation</i>
VBA Excel	Very Good	<i>Proficient in extending MS Excel functionalities for data automation and task efficiency</i>

Frameworks & Tools

UiPath	Very Good	<i>Proficient in developing and orchestrating RPA workflows to automate complex business processes</i>
Django	Advanced	<i>Skilled in building robust, scalable web applications and RESTful APIs for a variety of use cases</i>
Spring Boot/Spring MVC	Very Good	<i>Used for building robust enterprise-grade backend services</i>
Next.js	Advanced	<i>Modern React framework for building scalable web applications</i>

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IT Consultant and Software Developer with over 10 years of experience.

React Native	Good	<i>Cross-platform mobile development with React Native</i>
Laravel/Lumen	Very Good	<i>Extensive experience in creating scalable, secure web applications and APIs</i>
TensorFlow	Good	<i>Experience in developing machine learning models for predictive analytics</i>
JavaFX	Good	<i>Experience in building desktop applications with rich UI/UX features</i>
ROS2	Good	<i>Hand-on experience in developing and simulating drone systems with real-time data processing capabilities</i>

Databases

PostgreSQL	Very Good	<i>Proficient in database design, query optimization, and data migration for web and enterprise applications</i>
MySQL	Very Good	<i>Proficient in database design, query optimization, and data migration for web and enterprise applications</i>
Oracle SQL	Very Good	<i>Skilled in developing and optimizing PL/SQL queries for robust database management</i>
SQLite	Very Good	<i>Used for lightweight database solutions in mobile and web applications</i>
Neo4j	Good	<i>Hands-on experience in graph database development and query optimization for connected data systems</i>
ArangoDB	Good	<i>Hands-on experience in multi-model database development for complex data structures</i>

DevOps & Cloud

Git	Advanced	<i>Advanced in version control, branching strategies, and collaborative workflows</i>
Docker	Good	<i>Utilized Docker for containerization and Docker-in-Docker for Jenkins environment</i>
Jenkins	Good	<i>Managed Jenkins setup, created Jenkinsfiles and customized CI/CD pipelines</i>
Maven	Advanced	<i>Proficient in managing dependencies and build lifecycles for Java projects</i>
AWS	Good	<i>Cloud services and infrastructure management</i>
CI/CD	Good	<i>Configured and managed Jenkins for automated CI/CD pipelines</i>

Languages

French	Native proficiency (C2)	<i>Ideal for communication, documentation, and collaboration in French-speaking environments</i>
English	Advanced proficiency (C1)	<i>Strong written and verbal skills for professional communication and project collaboration in international settings</i>
German	Advanced proficiency (C1)	<i>Fluent in both written and spoken German, with experience studying and working in German-speaking environments</i>

Interests

Programming	Programming, building apps, playing with new frameworks, developing new skills, solving problems, challenging myself
Sport	Basketball, football, swimming and other sports
Learning	Reading, experimenting
Electronics	Electronics of all sorts

Martial arts Judo, Tai-Chi, and others

Philosophy Modern and ancient