

Arboy Magomba

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EDUCATION

University of Oklahoma

Norman, OK

Bachelor of Engineering in Computer Science

Aug 2023 – May 2027

Relevant Coursework: Data Structures & Algorithms, Discrete Structures, Programming Structures and Abstractions

TECHNICAL SKILLS

Programming Languages: Java, C++, Python, Dart, JavaScript, HTML/CSS, SQL

Frameworks: React, Next.js, Node.js, Flutter, MongoDB, WordPress, Material-UI, RestfulAPI

Developer Tools: Git, GitHub, Google Firebase, Visual Studio Code, Eclipse, IntelliJ, Apache Cordova

Libraries & Others: OpenCV, Pytest, JUnit, Bootstrap, Tailwind CSS, Figma

PROJECTS

AI PromptHive Web App | *Next.js, JavaScript, MongoDB, Google Cloud Platform*

Dec 2024 – Present

- Developed a full-stack web application using Next.js implementing AI prompt sharing capabilities and a local LLM
- Implemented Google OAuth (Authentication) to enable users to sign-in using their Google account profiles
- Used MongoDB for database management storing user profiles and their generated AI prompts
- Trained and integrated Llama AI to the web application for office use

Autocomplete Search Engine | *Python, Django, Java, SpringBoot, PostgreSQL*

Sep 2024 – Nov 2024

- Developed an auto-complete search engine for Oklahoma City Thunder NBA team's internal application
- Built a functioning web application with a REST API that fetches player data from a PostgreSQL database (backend) and sends it to the frontend designed using Flutter and Angular
- Functionalities include front-end office usage, scouting and coaching staff usage
- The search algorithm ensures robust data handling and up to 15% faster searching capabilities

Blockchain & Mining Simulation Project | *Java, IntelliJ IDEA*

Jun 2024 – Aug 2024

- Engineered a java-based blockchain simulation demonstrating block creation, cryptographic hashing and Proof-of-Work mining
- Using a validation mechanism, blocks are linked securely to the previous one, ensuring chain integrity.
- The project is a practical, educational-tool for learning, testing and experimenting with blockchain technology.

EXPERIENCE

Software & Game Developer

Nov 2024 – Present

K20 Center - University of Oklahoma

Norman, OK

- Utilized React frameworks for full-stack JavaScript development, ensuring scalable solutions across web platforms
- Leveraged *Llama AI* to train and deploy custom AI models, enhancing personalized user experiences
- Contributed to the development of "Quest App", a mobile app enabling AR-based visits to different locations
- Utilized Visual Studio Code and GitHub to streamline development and debugging processes

Software Engineer

Sep 2024 – Present

Sooner Competitive Robotics

Norman, OK

- Collaborated with a team to design and build a tele-operated robot for a University-level robotics competition
- Utilized Linux and Python as core development tools and environments
- Enhanced robot capabilities for navigation, investigation, and interaction by up to 25% compared to the previous model, leveraging WebRTC and Raspberry Pi for wireless communication

Technology Intern, Creative Director & Co-founder

Jul 2019 – Present

Robotech Labs, Teksafari Organization

Tanzania, Germany

- Implemented a real-time transcription device and automated hand-washing faucets to improve hygiene and reduce contact by 30% during COVID-19, projects which were deployed in local hospitals
- Designed and launched a user-friendly website, prototyping optimized UI/UX for improved accessibility
- Developed an online learning platform to equip youth with essential technological skills
- Leading efforts to expand the organization's global entrepreneurial presence
- Contributed to innovative projects, bridging software and hardware for real-world applications utilizing Python and C with Arduino and Raspberry Pi development platforms