Mouhamed Mbengue

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A motivated and versatile Computer Science student with a strong foundation in mathematics, logic, and programming. Experienced in full stack development, AI/ML implementation and creating scalable software resolutions. Eager to utilize technical skills and problem-solving to profound projects.

EDUCATION

University Of Rochester | Rochester, NY **MAY 2026**

Bachelor Of Science, Computer Science

Relevant Courses: Data Structures & Algorithms, Discrete Mathematics, Linear Algebra, Calculus I, Calculus II, and III.

TECHNICAL SKILLS

Languages & Technologies: Java, C, JavaScript, CSS, PHP, Markup, React, React-Native, Git, Python, Jupyter, Azure, and MongoDB.

Operating Systems: Windows XP/Vista/7/8/10/11 and macOS.

EXPERIENCE

Karpool **MAY 2024 – AUGUST 2024**

Software Engineer Intern Cape Town, South Africa

- Designed and implemented a **user settings interface** in **React-Native**, **integrating seamlessly with microservice APIs** and **enabling real-time user preference syncing** across devices using **secure backend services.**
- Developed **scalable serverless functions** using **Node.js and Azure Functions**, **enhancing backend resilience, observability** (via Azure Monitor), and **system fault tolerance** with advanced error recovery workflows.
- **Reduced user-reported** issues by **25%** and **boosted app performance** by **15%** through **end-to-end optimization** of **API payloads, caching strategies, and database access patterns.**
- Developed key features to **improve user experience and interface**, such as implementing a **Report User function to** flag inappropriate behavior. Additionally, **improving user satisfaction through multiple implementations.**
- Created **secure file upload functionality**, handling **over 1,000 file uploads weekly**, with **zero reported data breaches.**

BM Prime Capital **JANUARY 2024 – APRIL 2024**

Software Engineer Intern Remote

- I**ncreased efficiency by 15%** across five major projects utilizing **PHP, JavaScript, ReactJS, and TypeScript,** reducing project timelines. Streamlined development processes by **introducing reusable components** and optimizing code structure.
- Led the **integration of 10+ APIs**, ensuring **seamless data flow** and r**educing data transfer errors by 25%,** while optimizing request handling. Additionally, **improved client-side performance by 20%** through **efficient API calls** and reduced latency.
- Enhanced **CMS database** retrieval notably improving data quality and accessibility, **leading to a 10% increase in user interaction.**
- **Implemented caching systems** to **optimize query speeds** which resulted in reducing load times and enhancing application responsiveness. Fully resulting in a more seamless, efficient, and **scalable user experience.**
- **Collaborated** in a **dynamic team environment**, quickly adapting to evolving requirements and challenges, which contributed to the **successful completion** of **three major project milestones ahead of schedule**, ensuring high-quality deliverables.

PROJECTS

AI-Driven Sports Application | https://github.com/mbengue1/project-neptune **Python | TypeScript | JavaScript | React | Kubernetes | AWS**

- Developed a **scalable, AI-driven sports betting platform** using **hybrid microservice's** architecture with **Docker & Kubernetes.**
- Built core services including the **Betting Engine** (odds updates, bet placement), **AI/ML Service** (predictive analytics, personalized recommendations), and **Payment Service** (Stripe integration, transaction management).

Full Stack SWE Blog App | https://github.com/mbengue1/SWEBlogApplication **Node.js | Express.js | JavaScript | React | MongoDB**

- Created a **Software Engineering blog platform** using the **MERN stack**, allowing users to create, manage, and view blogs with features like **user authentication** and **category filtering**. Implemented **responsive design** principles for seamless accessibility across devices.
- Utilized **Node.js** and **Express.js**, **MongoDB** for the database, **Cloudinary** for file storage, and **JWT** for **authentication**.

AI- Powered Incident Response System | https://github.com/mbengue1/ai-incident-response-system **Node.js | Redis | PostgreSQL | OpenAI**

- Engineered a **real-time, AI-assisted incident management platform** simulating enterprise grade SRE tools like Prometheus.
- Built **backend services** for **ingesting alerts, classifying incidents via GPT-3.5**, and dispatching Slack/email notifications using **Redis queues and OpenAI APIs.**

U.S. Citizen | Available Summer 2025