# Serena Noboudem

### **EDUCATION**

### Kennesaw State University, GPA: 3.91,

Bachelor of Science in Computer Science

May 2025 | Kennesaw, GA

**Coursework**, Software Engineering, Data Structures, Algorithms, Database Systems, Artificial Intelligence, Parallel & Distributed Systems, Software Architecture

### **SKILLS**

Java, Python, React.js, MySQL, Spring Boot, Git/GitHub, HTML/CSS, JavaScript, Postman, PostgreSQL, JWT, AWS, Kotlin, Firebase

### WORK EXPERIENCE

### Software Engineer, Intern, Afriland First Bank

Jun 2023 – Aug 2023

- Engineered a secure authentication system using OAuth2, JWT, and 2FA for a banking app, ensuring **100**% compliance with banking regulations and reducing unauthorized access attempts by **40**%.
- Collaborated with cross-functional teams to deploy AWS **EC2** and **S3** solution, integrating CI/CD pipelines with Jenkins, resulting in a **30**% increase in delivery speed.
- Supported the deployment and scaling of a containerized banking app using Kubernetes, ensuring **99.9**% uptime and reliable access for **10,000**+ concurrent users.

### Software Engineer, Intern, PKF Research Center

Jun 2022 - Oct 2022

- Built and maintained a **RESTFUL API** for a learning management system using **Spring Boot**, handling **100**+ **requests/seconds** and improving data retrieval speeds by **25**%.
- Designed and enhanced a web-based analytical dashboard using HTML, CSS, and JavaScript, implementing interactive data visualization features that enabled data-driven decision-making and increased user satisfaction by 30%.
- Drove engineering best practices through active code reviews and contributions to coding standards, resulting in a 25% reduction in bug reports and improved code maintainability.

## **PROJECTS**

### Mobile D2L (Kotlin, Firebase)

- Built a modular Android app simulating the D2L course system using **Kotlin**, with **13**+ dynamic content types, streamlining **100**+ student access to learning materials, and improving navigation efficiency by **40**%
- Integrated **Firebase Authentication** and **Realtime Database** to handle secure logins and real-time content sync for up to **100+ users**, reducing backend development time by **60%**.
- Improved app performance by reducing **load time** by ~35% and eliminated manual data refresh through offloading content delivery to **cloud-hosted** Firebase infrastructure.

### FinHub (Spring boot | React.js | MySQL)

- Developed a finance tracker web app using **Spring Boot** and **React.js** to retrieve and analyze financial data from **5**+ bank accounts, enabling centralized **data aggregation** and delivering real-time insights to over **100 users**.
- Automated personalized spending insights and budget reports, helping users identify trends and reduce unnecessary expenses by up to 15%, improving financial decision-making
- Integrated the Plaid API via **WebClient**, enhancing HTTP request handling efficiency by **10**% and ensuring secure, scalable access to user financial data with reduced latency.

#### DNS Server (Python)

- Engineered a multithreaded DNS server in Python, handling 500+ queries per second, achieving 99% resolution
  accuracy by implementing efficient request parsing and high-throughput response construction aligned with RFC
  1035.
- Optimized packet processing and memory management by structuring DNS responses efficiently, reducing average response time by **40**% and significantly improving query throughput.
- Implemented multi-stage DNS request validation and parsing logic using **Python**, reducing malformed query attacks by 90% while conforming 100% to RFC 1035 standards.

### **COMMUNITY MEMBERSHIP**

### ColorStack | Member, Peer mentor

Feb 2024 - present

- Actively contribute to KSU's ColorStack chapter by enhancing the database platform using Postgres and reviewing pull requests
- Mentored 5+ peers in technical skills and career development fostering an inclusive and collaborative community.