Olivier John Ndjike Nzia

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Education

Northeastern University — Boston, MA

B.Sc. Computer Science | GPA: 3.6 — *Expected May 2025*

- Relevant Coursework: Object-Oriented Design, Algorithms and Data Structures, Computer Systems, Networks & Distributed Systems, Discrete Structures, Logic & Computation

Projects

Taskmaster | *PostgreSQL, Next.js, Node.Js, Express, Redis* — *GitHub* | Jun 2023 - Present

- Engineered a full-stack issue and project management interface that enables users to create, assign, and track projects, tickets, and bugs using Agile and SDLC methodologies
- Designed a relational database normalized up to 3NF using PostgreSQL to securely and efficiently store app data
- Implemented caching and cache invalidation through Redis to control traffic to PostgreSQL database, and improve app responsiveness while maintaining data integrity and validity
- Leveraged Express to build and optimize REST API routes allowing CRUD operations in PostgreSQL database
- Implemented authentication and role-based authorization by using hashes to enforce separate levels of privileges

Little Lens | *ReactJs, JavaScript, GraphQL, Sanity.io* — *Live Demo* | Mar 2023 - Jun 2023

- Developed a responsive social media application with image sharing, search querying, commenting and a live feed
- Designed schemas in a backend database using GraphQL and GROQ to send queries through the Sanity.io service
- Enabled authentication through Google OAuth to securely store user data and manage sessions for login/logout

Arnold the Astronaut | *Java, Twitter4j, Rest API* — Jan 2023 - Feb 2023

- Deployed an "astronaut" twitter bot that posts space related media and interacts with human users
- Queried the Twitter API through Java and Twitter4j to like, retweet, and comment on related space-ex posts
- Applied NASA API to grab random photos of space, and choose pictures from specified dates

Unix Shell | *C, Linux* — Nov 2022 - Jan 2023

- Developed a command line interface to parse, interpret, and execute command line arguments in Unix Shell
- Managed memory and child processes to enable system calls, sequencing, input/output redirection, and piping

Candid Conversations | *JavaScript, Python, Sockets* — *GitHub* | Dec 2022 - Jan 2023

- Built a socket-enabled chat room application allowing for text communication between multiple clients over LAN
- Enforced TLS encryption protocol onto sockets to securely transfer data packets between server and clients
- Integrated an intuitive UI through JavaScript to further advance user interactions

Polished Pixels | *Java, JUnit, Swing* — Oct 2022 - Dec 2022

- Developed an image processing application with 11 different image filters using kernels and convolution matrices
- Implemented an intuitive CLI and a Swing GUI to enable interactions with the processor
- Streamlined conversions between different image formats to support seamless imports and exports
- Utilized JUnit and mock classes to test classes and interactions between model, view, and controller packages

Experience

Khoury College of Computer Sciences — Sep 2022 - Dec 2022

Teaching Assistant for Discrete Structures — *Boston, MA*

- Assisted in teaching Discrete structures concepts such as combinations, graphs, and logical statements
- Offered individualized and group-led guidance and clarification to students during office hours
- Conducted review sessions and recitations to reinforce key concepts prior to key exams and homeworks

Technical Skills

Languages: Java | JavaScript | Python | C/C++ | SQL | GraphQL | Unix Shell | HTML/CSS

Frameworks/Technologies: ReactJS | Git | Bash/Zsh | JUnit | Swing | IntelliJ IDEA | PyCharm | Linux