MILES ENG

✉ miles.eng@duke.edu | 📱 +1 (425) 230-7212 | </> milesreng.com ⦿ github.com/milesreng 🔗 linkedin.com/in/milesreng

Driven college student with a strong foundation in application development. Proficient in a wide array of technologies, including Java, Python, React, and SQL. Passionate about leveraging technology to develop innovative solutions that drive social impact.

Education

Duke University   Aug 2021 - May 2025

B.S. in Computer Science and Global Health   GPA: 3.9

Relevant Courses: Design & Analysis of Algorithms, Advanced Web Development, Database Systems, Regression Analysis, Graphics Software Architecture, Computer Architecture, Data Structures & Algorithms, Discrete Math for CS

Experience

Duke University GEMINI Center   Aug 2023 - Present

Research Fellow & Application Developer   *ReactJS, JavaScript, Firebase, AWS*

- Develop an open-source multilingual computer application to understand the feasibility of an alternative approach to assessing alcohol use behaviors, based on the Research Domain of Criteria (RDoC) framework
- Employ collaborative Agile methodologies on a weekly basis, incorporating application feedback from pilot studies in the US and Brazil to enhance user experience and cultural appropriateness
- Facilitate effective communication between the software development and non-technical content subteams by creating comprehensive documentation to expedite translation of content outlines into code

Oak Street Health   May 2023 - Aug 2023

IT Applications Intern   *Salesforce, SQL*

- Implemented security controls, roles, profiles, and permission sets in Salesforce CRM to ensure data security and compliance with HIPAA regulations
- Participated in daily Agile stand-ups and assisted in the documentation of business processes, contributing to a clearer understanding of workflow inefficiencies and potential areas for improvement
- Significantly increased the efficiency of critical user workflows by leveraging flow automation tools to reorganize account creation and maintenance processes

Duke University Statistics Department   Aug 2022 - Dec 2023

Undergraduate Teaching Assistant   *R (programming language)*

- Assist with teaching introductory data science courses in R with an enrollment of 300+ students by developing lesson plans for sections of 25-30 students, providing feedback on lab assignments, and holding office hours
- Communicate effectively with the professor and graduate TAs to continuously evaluate student progress and develop plans for improvement

Projects

Rideshare Pathfinding Algorithms Case Study *Python, R*   Nov 2023

- Collaborated with a team to analyze the efficiency of different algorithms in passenger to driver matching and route calculation using NYC road network and rideshare data
- Implemented an optimized A* heuristic balancing Manhattan distance and passenger wait times, increasing algorithmic efficiency by about 5x compared to original Dijkstra's shortest path algorithm
- Utilized advanced data structures such as kd-trees for improved spatial queries and implemented a weighted fair queuing system to manage ride requests, further enhancing algorithmic efficiency

Statify for Spotify *React, Node, Express, TailwindCSS*   Aug 2023

- Engineered a personalized music web application built from scratch using NodeJS with React and Express, using TailwindCSS to design a responsive, mobile-friendly user interface
- Integrated Spotify API to securely access and display a snapshot of user's music preferences including their most-played songs, genres, and artists

Skills

Competencies: full-stack web development (NodeJS, ReactJS, RESTful APIs), database management systems (SQL, XML, MongoDB), data analysis, machine learning, graphics software development, Agile methodologies, Microsoft Office

Languages & Technologies: Java, JavaScript, TypeScript, C/C++, Python, HTML/CSS, R, Git, Salesforce