Alan Zhan

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EDUCATION

Northeastern University| Khoury College of Computer Sciences ***Bachelor of Science in Computer Science*** **2021-2025**

- **Relevant Coursework**: Data Structures and Algorithms, Object Oriented Programming, , Database Design, Discrete Math, Web Development, Computer Systems, Software Engineering, Cybersecurity

SKILLS

- **Languages**: Java, Python, JavaScript, Typescript, SQL, MongoDb, C, C#, R, HTML/CSS, MIPS Assembly
- **Frameworks/Tools**: React, Node.js, Three.js, Vite.js, Swing, Express**,** Git, Cypress, Slack, Linux

EXPERIENCE

Incyte| Data Science Intern | Wilmington, DE **Jun 2024 - Jul 2024**

- Developed an interactive web application using Shiny in R to showcase the cost savings potential of a specific drug compared to its competitors, empowering HCPs to make informed decisions based on financial data.
- Designed intuitive and visually appealing data visualizations, including comparative charts and graphs, to effectively communicate the cost advantages of the drug across various scenarios.
- Implemented user-friendly controls and filters within the Shiny application, allowing users to dynamically explore and analyze cost savings data based on their specific requirements.
- Engineered an automated data pipeline using R to extract, transform, and load data from various sources, streamlining the data preparation process for a network meta-analysis program.
- Developed sophisticated data mapping and transformation algorithms to convert raw data into a format compatible with the network meta-analysis software, ensuring seamless integration and reducing manual effort.

MIT Lincoln Laboratory | Software Engineering Co-Op | Lexington, MA **Aug 2023 - Jan 2024**

- Designed an automated data aggregation and analysis pipeline to analyze project performance with Java, transforming raw information into insightful visualizations that significantly enhanced decision-making processes for stakeholders.
- Implemented automated chart generation within the Java application, saving engineers ~1 day previously spent on manual chart creation per month.
- Worked on the standardization and digitization of work requests for a specific lab, designing and implementing a user-friendly web interface using JavaScript that encapsulated the entire work request process.
- Developed and integrated a robust back end, leveraging an Oracle database to efficiently store and manage all work request data.
- Implemented seamless integration with Lincoln Lab's internal Single Sign-On (SSO) system.
- Achieved remarkable time savings and efficiency gains by automating the work request process. The web application significantly reduced manual handling, enabling staff to focus on more value-added tasks.

PROJECTS

Spotify Clone:

- Independently conceptualized, designed, and implemented a Spotify clone using react and express.
- Integrated a mongo dB database through mongoose to manage user roles and to implement reviews on tracks and albums.

Disease Simulation:

- Developed a comprehensive disease spread simulation project in Java, utilizing a particle simulator to model the movement and interaction of simulated individuals.
- Incorporated a user-friendly interface allowing users to adjust key variables