Jackson Brouwer

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EDUCATION

University of Chicago   Chicago, IL
Master of Science in Computer Science   Expected Dec 2024
Bachelor of Science in Computer Science

- **GPA**: 3.71/4.00, Dean's List (2021-2022)
- **Focuses**: Backend, Cloud, Infrastructure
- **Organizations**: Kappa Theta Pi Professional Technology Fraternity, Institute of Politics Tech Team
- **Languages & Technologies**: Python, C, Java, Amazon Web Services, Node.js, JavaScript, Postman, Unix, Git, Jira
- **Frameworks & Paradigms**: SQL, NoSQL, REST API, Agile, Object-Oriented Programming, Flask

EXPERIENCE

Zelia   Chicago, IL
Software Engineering Intern   Jun 2023 – Present

- Designed and developed a backend to handle user, clothing, and ML data with 30+ endpoints using **Python Flask**
- Secured an acceptance into the renowned Techstars NYC, averaging $4M in funding, by engineering demo features
- Reduced data retrieval times and storage costs by 42% and 15% respectively by designing **AWS** infrastructure such as partitioned **Postgres** and **DynamoDB** databases as well as load-balanced **EC2** servers
- Migrated user data from a previous app version, resulting in ~50,000 additional users, by scripting and engineering a previous **SQL** database to map to our **SQL** structure and then uploading to **AWS RDS**

FuelCycle   Los Angeles, CA
Software Engineering Intern   Jun 2022 – Sep 2022

- Accelerated software development velocity with a 20% reduction in backend bugs found during Quality Assurance by implementing automated **API** unit tests in **Java** using the Java REST Assured library
- Guaranteed product integrity with a 45% reduction in bugs flagged in production by executing functional and regression **API** tests via **Postman**

University of Chicago Data Science Institute   Chicago, IL
Research Assistant   Apr 2021 – Feb 2022

- Improved overall user experience of a smart home assistance software, measured by 30% fewer user confusion flags, by engineering user-friendly feature improvements as a part of a UI prototype with **Angular CLI**
- Orchestrated integration between **MySQL**, **Python (Django), Angular**, and the 3D Simulation Environment

UNIVERSITY LEADERSHIP

University Chicago Institute of Politics   Chicago, IL
Volunteer Software Engineer   Sep 2021 – Jan 2022

- Increased the accessibility of an educational app for Chicago Public Schools students, growing the number of compatible devices by 70%, by implementing **iOS** compatibility in **JavaScript (React)**
- Led 5 engineers through architectural, design, and timeline planning in order to meet delivery expectations

PROJECTS

Drink App

- Implemented a mobile application in **Kotlin**, **Java, Python, Quarkus**, **MongoDB**, and **Docker** plus **AWS Lightsail**, **Cognito**, **Api-Gateway**, **Lambda,** and **S3** that hosted drinks with recipes, including search and filter capabilities
- Engineered information retrieval with Quarkus in MongoDB and developer emailing using Lambda and **SES**

FEATURED COURSEWORK

- Computer Vision, Software Engineering, Cybersecurity, Full-Stack Engineering, Computer Architecture, Theory of Algorithms, Data Structures & Algorithms, Statistics, Computer Systems, Discrete Math, Programming Languages