

Joshua Chen

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EDUCATION

Duke University

Durham, NC

B.S. Computer Science (Software Systems) | GPA: 4.0/4.0

Expected May 2025

Relevant Coursework: Data Structures, Algorithms, Distributed Systems, Database Systems, Operating Systems, Computer Architecture, Machine Learning, Computer Network Architecture, Data Science, Discrete Mathematics

TECHNICAL SKILLS

Languages: Python, Java, SQL, Javascript/Typescript, C/C++/C#, HTML/CSS, R

Architecture: REST APIs, GraphQL, CI/CD, Google Cloud Platform, AWS, RabbitMQ, PostgreSQL, MongoDB

Frameworks/Libraries: React, React Native, ASP.NET, Flask, Express, Vue.js, JUnit, Jest, Playwright

Tools: Docker, Kubernetes, Git, Jira, Datadog, Postman, Snowflake, Bash, Jenkins, JFrog, Gradle, Elasticsearch

EXPERIENCE

DraftKings

Boston, MA

Software Engineer Intern — Financial Platform

Jun 2024 – Present

- Engineered circuit breakers in **C# .NET backend** enabling system-wide withdrawal processing control during outages for **100+ on-call engineers**, achieving a **97% decrease** in paged response time.
- Migrated configuration settings to a cached **MySQL database**, enabling dynamic alteration of values without redeployment, reducing alteration time from **minutes to mere seconds**.
- Enhanced status monitoring and reliability of system serving **100k+ requests/day** through new **React** internal tools for managing system configurations, **Datadog** metric reporting, native logging, and new **JUnit** testing suites
- Strengthened security through role-based access control (**RBAC**), restricting configuration changes to admin users
- Designed **REST API** and **RabbitMQ** handlers to synchronize circuit breaker status across **Kubernetes** pods.

Duke Applied Machine Learning (DAML)

Durham, NC

Head of Software Engineering

Oct 2022 – Present

- Manage project assignment and communication for **100+ members** in the software engineering division.
- Lead training courses, host project help office hours, and provide oversight as PM for multiple ongoing projects.
- Trained **SK-learn** model to predict live win probability of NBA games with 0.187 Brier score (ESPN's: 0.166).
- Developed scraping and data manipulation pipeline in **R** to extract play-by-play data from **12,300** NBA games.

Recly - Finesse Formula LLC

Remote

Software Development Intern

Apr 2023 – Aug 2023

- Revamped **React Native** components serving **over 11,000 users** to address reported issues, enhance user accessibility and visual aesthetics, and tested within **Android Studio** environments.
- Reduced **Express API** response time by **40%** for event creation/filtering requests via **SQL** query optimizations.

PROJECTS

Nav-E [🔗](#) [📄](#) | Full-stack web app to assist users in planning multi-stop trips more efficiently.

React, Flask, Google Cloud Platform, GitHub Actions, Google App Engine

May 2023 – Dec 2023

- Engineered **REST API** endpoints to query trip information from **Firestore**, perform trip optimization calculations with implemented 2-opt algorithm, and interact with **Google Maps API** to get address and route details.
- Automated testing and deployment procedures through **CI/CD** pipeline, accelerating deployment process by **90%**
- Integrated **OAuth 2.0** policies through **Firebase** to ensure authorized access to stored user trip information.

Pikadle [🔗](#) [📄](#) | Wordle for Pokémon

React, Flask, Python, Javascript, PostgreSQL, NextAuth, Vercel

Sep 2023 – Dec 2023

- Designed **PostgreSQL** database schema & **REST APIs** to validate **NextAuth** authentication, query user statistics and achievements, and match Pokémon attributes based on user guesses.
- Built **React** Wordle interface and implemented new features like past archive, safari, and capturing system.

Scrabbl.io [📄](#) | Scrabble with more customizable options and boards.

Vue.js, Express, MongoDB, GraphQL, Docker, Kubernetes, GitLab-CI, Playwright

Jan 2024 - May 2024

- Developed **GraphQL** endpoints and **WebSocket** subscriptions to maintain real-time user state consistent with **MongoDB** database; automated **Playwright** testing suite through **GitLab-Runner**.