

DRAKE PHAM

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Summary

Full-stack developer with expertise in AI integration and scalable application/API development. Strong background in **computer science** and **software engineering**, consistently delivering high-quality solutions within **agile teams**. Achieved a **90% reduction** in deployment time using AWS in distributed, fault-tolerant environments, improved Python-based **response times by 35%**, and lowered database **costs by 40%**. Additionally, **mentored 20 students** in data structures and algorithms, preparing them for software engineering internships by enhancing their problem-solving skills.

Education

University Of Kansas

Graduated: May 2024

Bachelor of Science in Computer Science - GPA: 3.41/4

Lawrence, Kansas

- **Relevant Coursework:** Data Structures and Algorithms (C++), Object-oriented programming (C++), Database System, Communications Networks, Operating Systems, Theory of Computing, Compiler, Computer Architecture.
- **Club & Organization:** KUMC Toastmasters, New York Toastmasters, Upsilon Pi Epsilon.

Technical Skills & Certifications

Skills: C++, Typescript, Java, Python, DynamoDB, MySQL, Node.js, React.js, Spring Boot, Docker, Git/GitHub, HTML5/CSS3.

Cloud Computing: AWS (CloudFormation, Lambda, S3, API Gateway, Redis, CloudFront, Route 53, DynamoDB, Cognito).

Certifications: AWS Certified Solutions Architect - Associate, CodePath - Advanced Data Structure and Algorithms.

Experience

Software Engineering Fellow

July 2024 – September 2024

Headstarter | Python, Rust, Node.js, Next.js, EC2, ECR, Pinecone, Generative AI, Unit Testing

Remote - New York, NY

- Built **AI customer ChatBot** from **0 to 1** with a **team of 4** that creates concise resume summaries matching job descriptions, helping employers assess candidates quickly, leveraging **Test-Driven Development (TDD)**, **React.js**, **Next.js**, **OpenAI**, **Jest (Unit Testing)**, **Java**, **Spring Boot** and **AWS**.
- Contributed to the **Biome (14k stars)** open-source project with a **team of 4** by converting **GraphQL files to Abstract Syntax Trees**, detecting errors with **GraphAL-ESLint**, and writing **comprehensive Rust function tests** for syntax error detection.

Software Engineer Intern

February 2024 – May 2024

MarkovAI - Start up | Python, Docker, Microservice

Remote - San Francisco, CA

- Independently developed **Python-based data migration functions**, successfully transferring **8,000 events** to Appwrite's database and leveraging its system to achieve optimal request performance, reducing response time by **35% to 226.21 ms**.
- Developed and troubleshoot RESTful APIs for location-based event queries—enhanced user accessibility, query efficiency.
- Configured and tested an **SMTP mail server** using Mailgun—boosted email deliverability for event suggestions by **25%**.

Software Engineer Intern

May 2022 – August 2022

Zoi | Typescript, Node.js, React.js, DynamoDB, CloudFormation, Lambda, S3, Unit Testing

Ho Chi Minh, Vietnam

- Developed two search RESTful APIs in TypeScript within a 5-member Agile Scrum team—employed strict typing, code modularity, and comprehensive Jest testing; improved loading performance by 20%.
- Applied the design best practices (the Adjacency List Design Pattern) to consolidate three tables into one in **DynamoDB**, saving **40% cost**, enhancing **30% performance**, and simplifying queries.
- Utilized AWS CloudFormation to create Infrastructure as Code (IaC) files, integrating **S3**, **CloudFront**, **OAI**, **API Gateway**, **Lambda (Typescript)**, and **DynamoDB** for deploying a React app, resulting in a **90% reduction** in deployment time.

Leadership

Technical Interview Prep Coach

May 2024 – August 2024

CodePath | Leadership, Communication, Mentorship, Teaching, Feedback

Remote - San Francisco, CA

- Coached and mentored **20 students** in data structures and algorithms, covering Linked Lists, Strings, Arrays, Binary Trees, Graphs, and Dynamic Programming for software engineering internships.
- Regularly provided constructive feedback to help students improve in **5 LeetCode problems** during **weekly 1-hour sessions**.

Projects

HelpMate | *Javascript, Node.js, Express.js, React.js, MySql*

[GitHub](#)

- All-in-one platform combining academic schedules, travel plans, weather updates, and social events into a single platform for better management of college student life, resulting in over **100 students** signing up.

Tetris Game | *C++, Object-oriented Programming, Unit Testing, Raylib*

[GitHub](#)

- Developing a Tetris game in C++ using raylib library, applying **inheritance**, **encapsulation**, and **abstraction**.

Shape Area | *Java, Object-oriented Programming*

- Used **inheritance** and **encapsulation** to build a shape area calculator, learning OOP in Java

Rust Operating System | *Rust, Cargo, x86_64 Architecture, Assembly, Bootloader, Paging, Interrupt Handling, UEFI/BIOS*

[GitHub](#)

- Hands-on experience with low-level programming concepts like memory management, interrupt handling, CPU scheduling, and hardware abstraction, enhancing my proficiency in Rust and understanding of OS internals.

Database Performance with Amazon ElastiCache for Redis | *Python, ElastiCache, RDS(MySQL), VPC, EC2, Lamda*

[Certificate](#)

- Reduced a **application latency by 20%** by using Amazon ElastiCache as a cache with a database.