

# Duc Le

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## EDUCATION

### Texas Christian University, College of Science & Engineering

B.S. in Computer Science, B.S. in Mathematics

Expected May 2027

Cumulative GPA: 3.9/4.0

- Honors & Awards: Dean's Honor List (All Semesters), Google IT Support (2024)
- Relevant Coursework: Data Structures and Algorithms, Operating Systems, Object-Oriented Programming, Computer Architecture, Programming Languages, Linear Algebra, Statistics.

## EXPERIENCE

### Finbud: Personal Finance AI Assistant

Mar. 2025 – Aug. 2025

Software Engineer Intern

St. Paul, MN

- Architected and deployed a scalable **RAG (Retrieval-Augmented Generation)** pipeline using **Selenium**, processing and vectorizing **10,000+** financial documents and market/news feed data with **95% accuracy**.
- **Managed** and optimized a Qdrant vector database to store document embeddings, implementing indexing strategies that **accelerated similarity search speeds by 40%** for the RAG pipeline.
- Automated Azure **VM lifecycle** using PowerShell-based Azure Automation to start/stop VMs daily, creating a daily start/stop schedule that **reduced cloud costs by 25%** (approx \$18/month).
- **Secured** the **FastAPI** service by implementing managed identity authentication and input validation, protecting the RAG pipeline from unauthorized access.

### British Airways Reviews Dashboard

Jan. 2025 – May 2025

Software Engineer

Fort Worth, TX

- Collaborated in an agile team of 4 to design and deliver a real-time analytics dashboard processing over **3,000** passenger reviews, with a **TypeScript/Next.js** interface featuring 15+ interactive charts rendering in under 1 second.
- Streamlined the data pipeline with a daily **Snowflake** query triggered by **EventBridge**, invoking a **Lambda** to cache results as CSV in **S3**, reducing latency by **60%**.
- **Designed** and developed a RESTful API using **Spring Boot** to serve aggregated review data from S3 to the frontend, implementing pagination and filtering to handle large data loads efficiently.
- **Configured AWS CloudWatch** alarms and dashboards to monitor the health and performance of the ECS services and Lambda functions, ensuring **99.9% uptime** and enabling proactive issue resolution.
- Implemented CI/CD pipeline with **GitHub Actions** to run **Jest** and integration tests, achieving **90%** test coverage.

## PROJECTS

### EPL Players Stats API | Java, Spring Boot, PostgreSQL, Docker, SQL

[GitHub](#)

- Developed a **Spring Boot** backend with RESTful APIs to query English Premier League player stats via **Spring Data JPA** and **PostgreSQL**, adding query filtering and pagination for efficient stat retrieval by position, nationality, or club.
- Implemented user authentication and authorization using **Spring Security** and **JWTs**, with custom signup/login flows, email verification via expiring codes, and restricted API access based on user roles.
- Established a robust testing suite using **JUnit**, **Mockito**, and **Testcontainers** and integrated into a **GitHub Actions** CI pipeline to **automate all testing** and ensure code reliability before deployment.

### Forever | React.js, Node.js, Express, MongoDB

[GitHub](#)

- Built a scalable e-commerce platform using the **MERN stack**, engineering **15+ reusable React components** and a persistent shopping cart with the **React Context** for global state management.
- Designed a non-relational **MongoDB** schema to store products, users, and orders, optimizing it with proper indexing to ensure fast query responses and scalability for **10,000+ products**.

## TECHNICAL SKILLS

**Languages & Frameworks:** Python, Java, JavaScript/TypeScript, React.js, Vue.js, HTML, CSS, FastAPI, Spring Boot, Node.js, SQL

**Databases:** PostgreSQL, MongoDB, Qdrant, AWS RDS

**Libraries & Tools:** Git, GitHub, Vercel, Docker, AWS, Azure, Terraform, JUnit, Jest, Mockito, Testcontainers