Justin Lee

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EDUCATION

Boston College

Chestnut Hill, MA

Bachelor of Arts in Computer Science

September 2021 - May 2025

Experience

Backend Software Engineer Intern

June 2024 – August 2024

Teamworks

Durham, NC

- Engineered PDF/CSV generation feature in Flask to automate export of 1000+ multi-team trip itineraries for sports teams across the NFL, NBA and NCAA, streamlining scheduling workflows and reducing manual work.
- Designed and shipped core backend API endpoints & data models in Flask for a Facility Management system now used by 6,300+ teams to enable seamless facility referencing across calendars, messages, and booking modules.
- Boosted code coverage by 10% through test-driven development (TDD), writing thorough unit tests & snapshot tests that increased deployment confidence and caught edge case regressions pre-release.

Software Engineer Intern

June 2023 – August 2023

LG Electronics

Englewood Cliffs, NJ

- Delivered 10% improvement in logistics accuracy by building a Flask-based shipment validation tool that cross-referenced customer addresses using Google Maps API, preventing delivery errors and reducing processing time for **5+** warehouse teams.
- Improved data visibility for 50+ sales reps by automating real-time synchronization between MSSQL and Airtable using Python (pyodbc) and Airtable's API, streamlining data access across product and logistics teams.

Projects

Content Academy | React, Node.js, PostgreSQL

- Led a team of 4 engineers and designers to architect and deploy a scalable full-stack SaaS platform using React, Node.js, Redis, and PostgreSQL, supporting 750+ active users and integrating third-party APIs for personalized video content and displaying user analytics.
- Reduced dashboard and leaderboard load times by over 75% (4s \rightarrow 981ms) by implementing Redis caching, reducing redundant database reads and dramatically improving API response times in production.

Resolve | Flask, Next.js, OpenAI Whisper, PostgreSQL, Google Cloud Platform

- Built full-stack multimodal AI platform to analyze customer complaints across audio, text, image and video inputs, enabling real-time categorization and summarization of the complaints.
- Reduced manual customer support requests by 25% by integrating a RAG pipeline, enabling customers to source & query data directly from our dashboard.
- Containerized the application with Docker and deployed on Google Cloud Platform, ensuring scalability and reliability.

Boston College 4 Year Course Planner | Django, Javascript, PostgreSQL

- Enabled 9,000+ Boston College students and staff to plan courses and degrees more efficiently by building a full-stack web app with a JavaScript frontend, Django backend, and PostgreSQL for secure data management.
- Streamlined academic advising speed by 20% through implementing role-based access controls, multi-semester planning with automatic academic credit validation, and eliminating in-person meetings.

Technical Skills

Languages: Python, Javascript, Typescript, C++, SQL (PostgreSQL, MySQL), HTML/CSS

Frameworks & Libraries: React, Node.js, Flask, Next.js, TailwindCSS, LangChain, OpenAI API, SQLAlchemy Developer Tools: Git, AWS, Docker, Redis, Kubernetes, Postman, Pytest, Pinecone, Google Cloud Platform

Key Skills: RESTful APIs, JWT Authentication, RAG pipelines, Vector Database, Agile Development, Unit Testing