

Leon Israel

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Education

University of South Carolina

Bachelor of Science: Computer Science | Minor: Business Information Management

Major GPA: 4.0/4.0 | Dean's List 7x, College of Engineering and Computing First-Generation Scholar

Columbia, SC
Expected May 2026

Technical Skills

Languages/Frameworks: Java, JavaScript, C++, Python, HTML, Django, React, LangChain, LlamaIndex, Node.js, Express.js, SQL

Tools: MongoDB, DataBricks, DataDog, Nginx, Firebase, AWS, Microsoft Azure, Postman, OpenSearch, Grafana, Selenium, Kubernetes

Professional Experience

Qatalyst Health

Founding Engineer

Columbia, SC
November 2024 – Present

- Engineered a clinical reimbursement engine for nursing facilities by deploying **10** automated detection functions via **Gemini 2.5 Flash**, enabling background monitoring of progress notes for care patterns without increasing alert fatigue for clinical staff
- Integrated a machine learning pipeline for analyzation of reimbursement information from documents, integrating with **Django** for dynamic highlighting and user modification, increasing review speed by **13,100%** and improving accuracy by **99.7%**
- Architected a “LLM-as-a-judge” quality assessment system to validate AI-generated care plans against ground-truth clinical data, reducing manual review cycles from days to **20 minutes** while achieving a **94%** recall for identifying clinical inaccuracies
- Authored a DevOps transformation plan to migrate legacy infrastructure to a hardened **CI/CD** pipeline, implementing **SHA**-tagged deployments, automated security gates (**Bandit/Safety**), and multi-stage **Docker** builds to reduce image size by **60%**

Artificial Intelligence Institute of University of South Carolina

Artificial Intelligence Research Intern

Columbia, SC
January 2023 – January 2026

- Co-authored “KiMO: Knowledge-infused Multi-agent Orchestrator” (**Accepted at AAMAS 2026**); collaborated with a specialized team to engineer a two-stage pipeline utilizing planning ontologies and agent registries for multi-agent coordination
- Engineered comparison Q&A models using **Retrieval Augmented Generation (RAG)** via **LangChain** and **LlamaIndex**, partnering with a technical unit to increase response accuracy by **60%** compared to enterprise legacy models
- Architected an **NLP** pipeline processing **10,000+** data points using **Python Transformers** and **spaCy**, collaborating with a linguistics team to generate training data for deception detection models, achieving an **85%** accuracy rate an **83% F1-score**
- Developed a **React.js** front-end for mental healthcare AI chatbot; worked with a cross-functional team to integrate scraped assessment data and intuitive UI components, resulting in improved symptom identification and user management

UBS

Software Engineering Intern

New York City, NY
June 2025 – August 2025

- Reduced dataset testing time by **80%+** by automating realistic data generation using **TypeScript** and **faker** library integration
- Built **Python** and **Java** model context protocol servers enabling GitHub CoPilot large language model agents to trigger data lake exploration, task automation, and command line interface commands, eliminating manual database interactions
- Led development of **OpenAI LangChain** artificial intelligence system in **Python** and **React.js** to predict market risks from live news, leveraging sentiment agents and **XGBoost** prediction models to achieve **99%+** accuracy, presented to company CTO
- Designed a resume screening platform for candidate team matching, leveraging **OpenAI API** with **LangChain** and **Python** on a **React.js** application which is stored on an **Azure SQL** database, achieving a **95%** time reduction over prior methods

John Deere

Artificial Intelligence Engineering Intern

Chicago, IL
May 2024 – August 2024

- Automated artificial intelligence **LangChain** index tool reducing data indexing efforts by more than **70%** with **Python**
- Eliminated outdated data instances, creating a system to delete outdated data from **OpenSearch** vector store upon new uploads
- Implemented a feature for generative artificial intelligence agent displaying time-framed product information in production
- Developed a Retrieval Augmented Generation tool accelerating user support by **75%+**, generating pre-populated support forms

Sponsors for Educational Opportunity

Software Engineering Intern

Remote
May 2024 – July 2024

- Completed **300+** hours of computer science and software engineering training on full-stack, data structures, and algorithms
- Built **three** full-stack applications in SCRUM teams using **Python, MySQL, React, Jinja, JavaScript**, and **API** integrations
- Developed and trained a Convolutional Neural Network real-time sign language model, achieving **98%** accuracy on datasets

Empowered Buildings

Full Stack Software Engineering Intern

New York City, NY
June 2023 – September 2023

- Utilized **Selenium** and **JavaScript** to scrape third-party financial information, reducing manual data entry time by **95%**
- Implemented **MongoDB** to connect **300,000+** documents to **React.js** website, resulted in **40%** reduction in data retrieval time
- Developed **RESTful API** and **React.js** UI to visualize **7,000+** nested parameters across **300,000+** **MongoDB** documents