Yunseong (Lennie) Lee

Jersey City, New Jersey | yunslee812@gmail.com | 419-905-5502
linkedin.com/in/yunseonglee812 | github.com/ggamsang812

EDUCATION

Master of Science | Computer Science | **Georgia Institute of Technology** ***08/2024-Present***
Bachelor of Science | Computer & Information Science | **The Ohio State University** ***12/2020***

WORK EXPERIENCE

Software Engineer, Orion Innovation, Edison, New Jersey (Remote) ***08/2023-Present***

- Designed and implemented backend infrastructure and AI features using Python and React to streamline help desk operations
- Achieved better user experience, faster response times, improved observability of the system and reduced overall operational costs by **10%** by implementing in-memory caching, similarity search and access control
- AWS services used: Bedrock (Claude 2, Titan Embeddings Text), Kendra, RDS, ElastiCache, S3, IAM, CloudWatch
- Enhanced search by implementing similarity search to retrieve answers from previously asked questions matching user queries:
  - Improved response times by **60%**, reducing average query time from 5 seconds to 2 seconds, optimizing database interactions with AWS RDS and the embedding model
  - Reduced load on the large language model (LLM) by **60%** using an embedding model and managing vector data in PostgreSQL, enabling most queries to be answered by the embedding model instead of the LLM
- Introduced in-memory caching, enabling exact string-to-string matches from the database for user queries:
  - Accomplished faster read performance as measured by a **80%** improvement, reducing average response times from 5 seconds to under 1 seconds, by utilizing AWS ElastiCache for Redis
  - Optimized database performance by introducing a caching layer with Redis, reducing I/O operations on AWS RDS by **20%**
- Enabled data access restrictions, shifting from no access control to a system based on user authentication, ensuring compliance:
  - Expanded access control to cover nearly **30%** of all focus active directory groups by implementing SSO functionality with group-based restrictions
  - Integrated Microsoft Authentication Library (MSAL) for client-side authentication, identifying users' Microsoft Azure AD group memberships to dynamically select appropriate data indexes in Amazon Kendra accessed by LLM
- Migrated from an open-source embedding model to AWS model, reducing app size by **43%**, from 1.76GB to under 1GB, freeing up significant storage and streamlining deployment processes
- Facilitated a seamless transition to new team ownership by writing exhaustive documentation, including a detailed runbook

Software Engineer, Grange Insurance Company, Columbus, Ohio (Hybrid) ***11/2021-08/2023***

- Owned a discount application system, using React, Python and Robotic Process of Automation (RPA) system, applying automatic discounts to insurance policies for students with 3.0 GPA or higher
- AWS services used: AWS Lambda, Textract, IAM, S3, DynamoDB, CloudWatch
- Built a unit testing tool covering **70%** of Kubernetes clusters, Redis channels, and AWS services to validate connections and input/output pre- and post-deployment, streamlining troubleshooting by identifying broken connections or incorrect outputs
- Accelerated process time by **80%**, from 2 hours to under 25 minutes, by improving the UiPath RPA system and modifying the report generation component, eliminating the need for underwriters to manually inform developers of batch processing failures
- Shortened daily checkup time by **83%**, eliminating 30 minutes of manual checks with an RPA process that automates monitoring of Outlook emails in under 5 minutes, simplifies email management through a configurable file, and provides automated alerts

Software Engineer (Contract-to-Hire), TEKsystems Inc, Dublin, Ohio (Remote) ***03/2021-11/2021***

- Accomplished **80%** reduction in post-implementation testing time, from 3 hours to under 30 minutes, by implementing a PowerShell testing tool for OpenText Captiva Capture that efficiently matches SQL queried data with processed batches
- Achieved a **25%** reduction in deployment time by developing PowerShell utility script to enhance directory organization, file management, and data handling in XML and CSV formats, improving IBM Content Manager OnDemand system
- Streamlined weekly email review and organization time by **90%** by developing a PowerShell utility tool and alerting system for Microsoft Outlook that organizes incoming emails and generates alerts for specific conditions

TECHNICAL SKILLS

- **Languages**: Python, TypeScript, JavaScript, SQL, PowerShell
- **Tools / Frameworks / DB**: AWS, ReactJS, Git, Redis, Microservice Architecture, PostgreSQL, Kubernetes, REST APIs, OAuth
- **Certification**: AWS Certified Cloud Practitioner