Nagalakshmi L

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Portfolio: https://nagalaxmisl.github.io/nagalakshmi-website/ | https://github.com/nagalaxmisl

Software Developer experienced in building scalable cloud-native applications, REST APIs, and backend systems. Skilled in Python, Java, Flask, React, and AWS, with a strong focus on automating workflows, optimizing databases, and improving application performance.

SKILLS

Programming Languages: Python, Java, JavaScript, TypeScript, C++
Frameworks & Tools: Spring Boot, Flask, React, Django, REST APIs, Agile Development
Cloud & DevOps: AWS (Lambda, EC2, S3, RDS), Docker, Kubernetes, Azure
Database Technologies: MySQL, MongoDB, PostgreSQL
Other: CI/CD, Git, Unit Testing
ML Knowledge: scikit-learn, TensorFlow, PyTorch

WORK EXPERIENCE

Software Development Engineer | The Heel Inc, Green Bay, WI, USA | Jan 2025 – Present

- **Customer Loyalty Program:** Built **Flask-based REST APIs** for points accrual, reward redemption, and purchase tracking, integrated into a **React interface** to enhance customer loyalty experiences.
- Designed **AWS Lambda pipelines** for near real-time processing of Shopify purchase events, ensuring scalability and reliability of the loyalty platform.
- Implemented and managed **SQL and NoSQL databases (PostgreSQL, MySQL, MongoDB)** to improve data accuracy, scalability, and system performance.
- Improved application reliability by setting up **CI/CD pipelines (GitHub Actions, AWS CodePipeline)** and deploying containerized workloads with **Docker and Kubernetes**.

Software Developer Intern | The Heel Inc, Green Bay, WI, USA | Jun 2024 – Aug 2024

- Designed and implemented **Flask APIs and web applications** to manage customer databases, identify and merge duplicate records, and standardize data formats, improving overall data accuracy across the organization.
- Reduced duplicate entries on the **Shopify platform by 40%** through automated record-matching and backend integration with **AWS-hosted datasets** to ensure long-term consistency.
- Deployed applications on **AWS**, automating workflows and reducing manual effort by **25%** while improving scalability and reliability.

Patent Associate / Senior Patent Associate |Hourglass Research | India | Feb 2020 – July 2023

- Led technical evaluations for technologies in **e-commerce**, **streaming** & telecom, enhancing patent analysis and licensing strategies.
- Developed tools in **Python** and **Java** to automate patent analytics, increasing analysis efficiency and accuracy
- Generated in-depth licensing reports with patent-product mapping and economic models for strategic decision-making

Application Development Associate | Accenture | India | Aug 2019 - Feb 2020

- Engineered efficient software solutions by leveraging **Java**, **Dot Net**, and **MySQL**, focusing on **scalability** and **performance**
- Developed user friendly web applications with a keen eye on **performance**, **optimization** and help enhance brand outreach.

EDUCATION

Master of Science, Computer Science | University of Wisconsin-Milwaukee, USA | GPA: 3.81 | Sep 2023 – May 2025
Bachelor of Engineering, Information Science and Engineering | BNM Institute of Technology, India | GPA: 8.4 | Aug 2015 – May 2019

PROJECTS

Shift Punch (Ongoing)

- Building an **employee scheduling and attendance app** with role-based access and secure **PIN-based clock in/out**.
- Implemented backend using **Flask** with a **React front end**, deployed on **AWS (EC2, S3, RDS)** for scalability.

Task Manager Application

- Developed a **task manager app (Java + Spring Boot)** deployed on **AWS Elastic Beanstalk**, supporting multi-user task scheduling.
- Integrated **RDS, MongoDB Atlas, S3, and EC2** for backend storage and file management.

Cover Letter Generation and its Automatic Evaluation

- Developed a system to generate personalized cover letters using **GPT-4** based on Resume–Job Description pairs.
- Built an automatic evaluation pipeline using **KeyBERT** and **Sentence-BERT** to assess cover letter relevance via precision, recall, and other error metrics. Conducted large-scale evaluation on 1000 samples, and compared results against manual scoring.
- Achieved strong alignment between automatic and human evaluations with optimized keyword filtering.

CERTIFICATIONS

- Agile Development Practices — LinkedIn Learning (2025)
- Git Essential Training — LinkedIn Learning (2025)
- Supervised Machine Learning — Coursera, DeepLearning.AI (2025)