

LAKSHMI SWAMINATHAN

swaminal@purdue.edu | lakshmiswaminathan08@gmail.com | (260)-410-9214 |
<https://www.linkedin.com/in/lakshmi-swaminathan-g/> | <https://github.com/Lakshmi-swaminathan> |
https://leetcode.com/u/Lakshmi_Swaminathan/

EDUCATION

Purdue University

Fort Wayne, Indiana

M.S. in Computer Science

Expected Graduation, May 2025

- o **GPA:** 3.67/4.00
- o **Related Coursework:** Web Development, Software Engineering, Algorithm Design & Analysis, Cryptography & Network Security, NLP, High-performance Computing, Deep Learning, Software Design

Sastra University

Thanjavur, Tamil Nadu

Bachelor of Technology, Computer Science Engineering

2016-2020

- o **GPA:** 7.19/10.00
- o **Related Coursework:** Data Structures and Algorithms, Cryptography, Programming languages (Java, Python, C, C++), Machine learning, Deep learning

SKILLS

- **Programming languages:** Python, Javascript, Apex, Java, C++, C
- **Web technologies:** ReactJs, NodeJs, ExpressJs, LWC, Aura, Cypress, ChaiJs, MochaJs
- **Database technologies:** MongoDB, Mongoose ODM, SOQL
- **Software:** Visual Studio Code, Github, Jenkins, Jira, Postman, Confluence
- **Cloud services:** Familiar with the Google Cloud platform
- **Technologies/Frameworks:** Salesforce CPQ, Conga CLM, Familiar working with Docker environment, CI/CD, Lightning Web Components, 42Crunch security audit, Swagger API definition
- **Programming concepts:** OOPS, Data structures and algorithm design, Devops, Agile-based software development, Software development lifecycle(SDLC)
- **OS and High-performance computing:** Familiar with MacOS, Windows, and Linux. Proficient in parallel programming, multithreading, multiprocessing, distributed computing, high-performance computing, OpenMP, MPI
- **Artificial Intelligence(AI) technologies:** scikit-learn, Pandas, TensorFlow, Numpy, Scipy, classical machine learning models, Deep learning models, NLP, Gen AI for text, dimensionality reduction, XAI(Explainable AI)
- **Soft skills:** Communication Skills, Problem-Solving, Critical Thinking, teamwork, Adaptability, Time Management, Attention to Detail, Learning Agility, Empathy, Mentoring, Creativity, Self Motivation

EXPERIENCE

Verizon

Chennai, Tamil Nadu

Software Development Engineering- II

July 2022 – June 2023

- Spearheaded an innovative upsell sales process enhancement using Apex and Lightning web components following Agile methodology, streamlining workflow from ideation to production deployment, reducing process time by 34%, and increasing upsell conversions by 16%.
- Customized Salesforce CPQ with Lightning Web Components, improving user experience, which led to a 20% reduction in time spent on complex upsell transactions.
- Designed and Implemented a month-on-month dynamic contracting model in place of a fixed service term model with Apex, and LWC, resulting in an 11% increase in customer retention and a 14% improvement in service adaptability.

Verizon

Chennai, Tamil Nadu

Software Development Engineering- I

Sept 2020-June 2022

- Translated business requirements into technical user stories and consistently delivered on time.
- Collaborated with cross-functional stakeholders, leading to a 100% project completion rate within deadlines.
- Provided insights during design meetings, contributing to the creation of scalable solutions that reduced operational inefficiencies by 25%.

- Adhered to coding best practices, producing efficient, clean, and reusable code.
- Achieved Salesforce integration and security with a 98% accuracy rating in a 42Crunch security audit for the API.
- Resolved Salesforce governor limit exceptions in Apex triggers, reducing execution time from 5s to 15ms, leading to a 40% increase in system performance during production support.

Verizon
SDE Intern

Chennai, Tamil Nadu
Feb 2020-May 2020

- Learned and worked in Apex, Aura, Visualforce, Salesforce flows, Objects in Salesforce, Apex triggers, Javascript, SOQL, etc. Worked in large code bases.

PROJECTS

- **MERN Stack project** - "A Marketplace" - A platform where individuals can buy or sell products - <https://main--stellular-frangollo-39676b.netlify.app/> and completed End-to-end testing using Cypress framework.
- **Machine Learning Projects:**
 - ☐ NLP - Worked on a project to generate Linux commands based on user input text(Application of GenAI for text)- Using T5 base, T5 small, BART base, BiLSTM based encoder-decoder, BiLSTM based encoder-decoder with attention mechanism, BiLSTM based Encoder decoder with attention mechanism and Reinforcement learning using BLEU score.
 - ☐ Re-implemented the work done in the research paper "Extracting training data from large language models." authored by Nicholas Carlini and used Differential privacy for enhancement. - Applied various decoding strategies to the gpt2 model to expose training data embedded within the generated text, utilizing temperature sampling to control generation variability. Enhanced the approach by integrating Differential Privacy mechanisms to safeguard training data, thereby improving data privacy and model security by 25%
 - ☐ Currently working on research on "Effectiveness of brand promotion by AI influencer". - performed data analysis using classical machine learning models(XAI for explainability) from Scikit Learn(supervised and unsupervised), deep learning models from TensorFlow, and scipy to analyze large amount of survey data and AI influencer dataset from Kaggle. Generated actionable insights into brand promotion effectiveness; increased model explainability by 49%.
- Parallelized Sobel Edge Detection algorithm using OpenMP Parallel for, Parallel for collapsed, SIMD using both static and dynamic memory allocation and achieved 3x speedup.

COURSES & CERTIFICATION

- Problem-Solving certificate- Hackerrank
- Javascript certificate - Hackerrank
- CompTIA Security+ (SY0-601) Cert Prep: The Basics
- CompTIA Security+ (SY0-601) Cert Prep: 2 Secure Code Design and Implementation
- Building APIs with Swagger and the OpenAPI Specification
- Blockchain Basics
- Learning Tor and the Dark Web
- Learning Java 11
- Artificial Intelligence Foundations: Neural Networks
- Docker for Developers
- Large Language Models: Text Classification for NLP using BERT

AWARDS

- **Spotlight Award**- Quality/Process improvement -1 - [link to award](#)
- **Spotlight Award**-Accountability - 1 - [link to view award](#)
- **Spotlight Awards**- Personal commitment - 2 - [link to view awards](#)
- **Verizon Simple Thanks Awards** - Appreciating my work and collaborative nature from my peers - 20 - [link to view awards](#)