



Premnaath Varadharajan

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OBJECTIVE

Computer Science Master's candidate with 2+ years of experience in full-stack engineering, specializing in system performance and applied AI. Proven ability to optimize performance of applications and lead backend development for early stage products. Seeking an SDE role to build impactful software and tackle complex challenges.





EDUCATION

University of Southern California, Los Angeles, CA, USA 	Jun. 2025 – Present
<i>Master of Science in Computer Science</i>	3.7/4.0 CGPA
Anna University - College of Engineering, Guindy, India 	Aug. 2019 – Apr. 2023
<i>Bachelor of Technology in Information Technology</i>	8.97/10.0 CGPA

EXPERIENCE

Oracle 	Jan. 2023 – Mar. 2025
<i>Associate Software Developer</i>	<i>Hyderabad, India - Onsite</i>
<ul style="list-style-type: none">Developed a complete integration of Oracle's proprietary DataGrid component with Microsoft Excel, creating a reusable library that streamlined development for other engineers (AXCellence Award)Optimized performance of Aconex suite modules by using thread pools for concurrency and progressive loading for lazy UI, cutting load times by 27% and making workflows more efficientLed customer meetings alongside PM to define use cases and convert them into prioritized, shippable features	
<i>Project Intern</i>	
<ul style="list-style-type: none">Developed a panning canvas UI component from scratch to enable navigation across screens using mouse dragHandled DevOps tasks, including containerizing applications and creating deployment pipelines for a new product	
Coral Academy 	(Part-Time) Jun. 2024 – Feb. 2025
<i>Lead Backend Engineer</i>	<i>New York, NY - Remote</i>
<ul style="list-style-type: none">Led a team of 4 in backend development for an early-stage edtech start-up in the K-12 segmentDesigned scalable database schemas and architected the application based on PRDIntegrated Stripe for payments, Zoom for calls and optimized data handling using CF Workers and Supabase	
Assurant 	May 2022 – Jul. 2022
<i>Data Analyst Intern</i>	<i>Atlanta, GA - Remote</i>
<ul style="list-style-type: none">Developed quality control PowerBI dashboards and conducted code reviewsLeveraged direct query approach to minimise time elapsed to extract and transform data from warehouse	

PROJECTS

ARSort  <i>Swift, ARKit, RealityKit, Swift Playground Book</i>	2023
<ul style="list-style-type: none">Created an AR Swift Playground Book that brings sorting algorithms to life with interactive 3D visualizations, adjustable dataset size and speed, and step-through controls; submitted to WWDC SSC	
Linear Space Sequence Aligner  <i>C++, Dynamic Programming, Divide and Conquer</i>	2025
<ul style="list-style-type: none">Developed a sequence aligner using Hirschberg's algorithm to reduce space complexity from $O(mn)$ to $O(\min(m,n))$Integrated performance metric tracking to quantitatively validate significant efficiency gains in memory usage	
Multitask Offloader  <i>Python, xmlrpc, cProfile, pstats, Edge Computing</i>	2023
<ul style="list-style-type: none">Developed a decision-making algorithm to offload computationally intensive tasks from mobile devices to edge serversAchieved up to a 40% reduction in computation time for large inputs, enhancing overall efficiency	
PDF Wiser  <i>Python, Streamlit, LangChain</i>	2024
<ul style="list-style-type: none">Developed a Streamlit web app that retrieves answers from a provided PDF using natural language processingImplemented Retrieval Augmented Generation that uses advanced embedding models and re-ranking knowledge graph	

TECHNICAL SKILLS

Languages	Python, C++, Java, JavaScript, TypeScript, PostgreSQL, Go, Lua
Developer Tools	Git, Linux, Docker, Kubernetes, CI/CD Pipelines, Github Actions, Shell Scripting
Libraries & Frameworks	Flask, Django, Supabase, ReactJS, pytest, gRPC, C++ STL
Machine Learning	RAG, Embeddings, LangChain; IR/NLP Integrations
Concepts	OS, DBMS, CN, Distributed Systems, Caching, Logging, Multithreading

NOTABLE HIGHLIGHTS

- Received the AXCellence Award for the Extra Mile category from CEGBU's Vice President for FY24 Q3 at Oracle
- Won a \$150 cash prize as a runner-up in Oracle's IGIU FY24 Hackathon
- Participated in Apple's WWDC Swift Student Challenge 2022, earning a free entry ticket worth \$1000 to Apple Park, CA
- Awarded Certificate of Merit by CBSE for securing a perfect 10 CGPA in AISSE session 2015-2016
- Made contributions to [TLDR](#) pages, an open source community driven command line tool
- Online Profiles: [LeetCode](#), [CodeChef](#), [CodeForces](#), [GeeksforGeeks](#), [Hackerrank](#), [Stack Overflow](#)