Purandhar Sundaramoorthy

Sunnyvale,CA| (607)-235-8260 | pv.vittalan@gmail.com | Github | Linkedin | Portfolio

EDUCATION

Binghamton University, State University of New York - *Master of Computer Science*   **Aug 2022 - Aug 2024**
*(*Design & Analysis of Algorithms, Database Systems, Cloud Computing, Web Programming, Design Patterns, Software Project Management, Operating Systems, Programming Languages)

Anna University, India - *Bachelor of Engineering in Electrical and Electronics*   **Aug 2015 - May 2019**
Computer Programming, Object Oriented Programming(OOPs), Data Structures & Algorithms, Robotics & Embedded Systems

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, C, C++, Java   **Databases:** MongoDB, RDBMS, MySQL, PostgreSQL, Oracle, Redis
Web-Development: HTML5, CSS3, React.js, Next.js, Node.js, Django, TailwindCSS, REST, SOAP, GraphQL
Data / AI: ETL, PowerBI, Tableau, RabbitMQ, Kafka, LLMs, Langchain, AI Agents, Agentic AI Workflow Automation (n8n),
Cloud & Containerization: AWS, GCP, CI/CD, Github Actions, Gitlab CI, Docker, Kubernetes
Software Engineering & Development: SDLC, TDD, Agile, Linux/Unix, Git, Jira, Postman, Figma, Grafana, Vibe coding, Prompt Engineering

PROFESSIONAL EXPERIENCE

Systech Solutions, Associate Software Engineer | Chennai, India   **Nov 2021 – Mar 2022**
- Developed Dopplr, a cloud-based **data management** and **analytics** platform, for data-driven decisions for banking clients
- Designed backend with **object-oriented** design, optimizing API data flows, and interactions with both SQL and NoSQL databases
- Collaborated with AI/ML engineers to integrate Machine Learning algorithms into 10+ **backend API** to deliver structured insights
- Integrated ML-based anomaly detection in backend APIs, enforced **RBAC** for data security, and designed a normalized **database schema** to store transactions and user roles
- Parsed the **server-side** data and delivered it to the client-side via a **TypeScript** RESTful API for secure transmission of sensitive data
- Created **Python** software as an internal tool to generate **SQL** queries across **relational databases**, enhancing **query** efficiency by 60%
- Customized the **frontend** of Dopplr with HTML, CSS, and **JavaScript** to manage dashboards for 1000+ users, simplifying navigation
- Built with a component-based **architecture** using **React**, **Hooks**, managed state with **Redux**, and **ES6** standards for maintainability

Apar Innosys, Associate System Analyst | Chennai, India   **Mar 2020 - Oct 2021**
- Designed a **SaaS** platform for **managing**, visualizing, and **analyzing** IoT devices through a **web application** supporting 2000+ devices
- Developed a **Python backend** with an MQTT broker to publish real-time data, ensuring high availability and low latency by 25%
- Built a **Node.js** server to subscribe to the topics to update the **frontend** via RESTful API and **WebSockets** for real-time monitoring
- Stored device data and metadata in a structured SQL database for efficient querying, historical analysis, and integration across services
- Deployed **scalable cloud** solutions with AWS S3 and Lambda for efficient data and video storage, handling up to 5TB of data
- Executed testing and **debugging**, achieving 80% reliability and uptime in IoT integrations and **backend** services operations
- Maintained and redesigned the **frontend** application using JavaScript and HTML to display IoT device statuses and data, delivering a user-friendly **interface** for **real-time** monitoring while reducing **code complexity** by 20% through **clean code** practices
- Crafted **Python** software to handle data processing and efficiently parse vendor data into JSON format for seamless **integration**.
- Performed troubleshooting, code reviews, and **mentored** 5 engineers, focusing on **teamwork** in a collaborative team environment
- Improved **system** stability by 10% through **troubleshooting** and **problem**-solving, analyzing 10 million data samples with **Python** tools

INTERNSHIP EXPERIENCE

Binghamton University, Software Engineer Intern (**Remote**)| **New York**, USA   **Oct 2024 – Present**
- Designed Issue Tracker **CRM page** for Decker Medical Science using React.js, Next.js (TypeScript), Tailwind CSS, and **Axios**, following **test-driven** development (TDD) and **system design** principles
- Engineered a **scalable** backend **microservice** with Node.js (Express), MySQL, and MongoDB(NoSQL) on GCP, **implementing** coding standards, **code reviews**, **source control** management (Git), continuous deployments, testing, and operations

Entertainment Technologies Inc., Software Development Intern | **California, USA**   **July 2023 – May 2024**
- Created a **UI/UX** for a media **management** application, with **ReactJS** for a **responsive** frontend, to cut average task completion time.
- Integrated **4** vendor **APIs**, tested and validated them with a 90% functionality, and applied **JWT authentication** for secure access
- Debugged 20+ complex issues in **web pages**, addressed **bugs** related to **business** requirements, and ensured adaptive responsiveness
- Communicated in an **Agile** development environment for software design, code management, and **version control** with **GitHub**
- Assisted the team with **DevOps** and CI/CD release management using AWS, achieving a 40% reduction in **deployment** time
- Coordinated in 10+ code reviews, **scrum** meetings, and **cross-functional** technical **support** meetings from the frontend team
- Adapted AWS cloud services like S3, Lambda functions, IAM, AWS Glacier, EC2 for workflow orchestration of the Asset
- Orchestrated an **AI**-powered **GenAI** chatbot using **LangChain** and **OpenAI** API to enhance data retrieval and answer generation with a Large Language Model (**LLM**), enabling NLP-driven data analysis and Q&A for a news research tool built with Streamlit, leveraging Retrieval-Augmented Generation (RAG) for improved processing.

PROJECT EXPERIENCE

- Deployed a **Flask** web server and MongoDB on GCP VMs, with **Docker** for **DevOps**-driven CI/CD and hosted **containerized** live messaging **microservices** via Docker on a **Kubernetes** cluster using YAML files for **deployment** orchestration
- Automated workflow with **Agentic AI** for real-time API data ingestion and activity scheduling using **OpenAI LLM** API via n8n, delivering emails and logging to Google Sheets, learning AI orchestration, API integration, **automation frameworks**, and **scalable** system design