

Annamalai Arumugam

(714) 515 9769 • annamalai.vignesh7@gmail.com • [LinkedIn](#) • [GitHub](#) • [Portfolio](#)

EDUCATION:

Master's in Computer Science

(3.7/4.0) **(08/2022 to 05/2024)** Cal State University, Fullerton, CA

Bachelor's in Information Technology

(3.6/4.0) **(06/2012 to 06/2016)** SASTRA University, India

Technical Skills:

Programming: JAVA, Python, C, C++, Node, React, Redux, Angular 7, Typescript, HTML5, CSS, ES6, JavaScript, ExpressJS, Django, Angular, Nginx, Apache, HTML5, CSS **Technologies:** Rust, Kafka, Azure, AWS, GraphQL, Mocha, JPA, Spring MVC, JUnit, microservices, NPM, Babel, Python Flask, Clarity Design, Artifactory **Cloud Tools & Cloud Computing:** KVM, QEMU, AWS, Ansible, Terraform, Docker, Grafana, Kafka Kubernetes **DevOps Tools:** Ansible, Jenkins, Chef, and GIT **Other Frameworks:** SDWAN, BING, Encog, MQTT, DataDog. **Databases:** RDBMS, Mongo, MySQL, HBase, NoSQL, ORM.

WORK EXPERIENCE

Independent Graduate Researcher, Digiclips Inc

08/2022 to 12/2023

- Developed chatbot for the university ECS department using OpenAI and ease the freshman onboarding, This Bot will use existing ITuffy data and 20+ existing links on the landing page.
- Initiated FFMPEG video recording adapters, Mysql and Docker containers to convert the recorded conversation to text which also Kafka message queues for streaming - Increased Digiclips TV backend server efficiency by up to 50%.
- Kafka Message queues were also used for publisher subscriber scheme for frame consumption by digiclips search engines - This frontend uses angular 16, ExpressJS, Redis Mocha, NGINX load balancer

Senior Software Developer, Viasat Inc.

01/2018 to 08/2022

- Led the Retail Billing full stack-based platform for modem devices and owned 3 core microservices components such as data usage, calculation service, and payment services - Used MQ to send real-time data which increased billing accuracy by up to 50%.
- Designed and implemented a user authentication service and authorization service using **Spring Security** and **JWT**, enhancing system security and reducing unauthorized access incidents by 50%.
- Increased billing calculation speed by 30%, handling up to 10,000 transactions per second during peak usage times - Achieved using Kubernetes horizontal scaling in **AWS EC2** and decoupled the components to communicate using Kafka message queues.
- Managed core Calculation service which handles up to 10 TB of customer usage information that service interacts with both My SQL and Mongo data store using Hibernate and Spring Data services.
- Use Prometheus and Grafana to monitor the performance of the billing service continuously in AWS - Set up alerts for high latency and errors, enabling auto resolution using AWS Cloud Watcher and AWS Lambda results in reducing average incident response time by 40%.

Associate Software Developer, Genesys Telecomm Labs

06/2016 to 12/2017

- Created custom SIP endpoints for 200+ contact center agents based on user requirements using a Java-based SDK toolkit, and designed web VOIP phones with **SIP Protocol** and **WEBRTC packages**, utilizing **Java**, **Spring Boot**, and **RESTful services**.
- Spearheaded the development of an IVR strategy design tool using **Java**, **Spring Boot**, and **Python**, generating runtime service flows for production - Increased service flow generation speed by up to 2x compared to manual creation.

Application Developer Intern, Vmware Inc

01/2016 to 06/2016

- Created a machine learning and artificial intelligence tool to predict future IT ticket escalation based on finding historical patterns.
- Designed the model with Java and the ENCOG ML framework, along with Weka as the data analysis tool. Applied SMOTE and Random Forest algorithms to a dataset of 10,000+ tickets using the MLP neural network.
- Sketched a UI/UX interface for the machine learning model using JSPs, Servlets, Angular, and the Spring MVC framework to display the predicted data to over 500 users.

Awards and Certificates:

- AWS Certified Solution Architect, 12/2023 to 12/2024
- Elite NPTEL Certified Programmer
- Certified Agile Scrum master
- Address: 3330 Topaz Ln, Fullerton, CA 92831