

SAAI VIGNESH PREMANAND

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Education

Indiana University, Bloomington, IN

Aug 2022 - May 2026

Masters of Science in Computer Science

Relevant Coursework: Applied Algorithms, Computer Networks, Machine Learning

S.A. Engineering College, Chennai, Tamil Nadu

Sep 2018 - June 2022

Bachelors of Engineering in Computer Science and Engineering

GPA 9.2/10

Technical Skills

Languages: HTML, CSS, JavaScript, TypeScript, Python
Frameworks/Libs: Angular 9+, ExpressJS, NestJS, React, TensorFlow, Keras
Databases: MongoDB, MySQL, PostgreSQL
Platforms/Tools: VS Code, NodeJS, Postman, AWS Cloud, Jupyter
Project Management: Jira, Trello, Git, BitBucket, Confluence

Work Experience

StellarLogix

Jan 2024 – July 2024

Software Engineer

Chennai, India

- Devised a scalable **AWS cloud architecture** for a IoT-based vehicle tracker which works over CoAP & MQTT transport.
- Planned & successfully executed the development of an ESL software solution using **MERN** stack and delivered it on time.
- Successfully trained and helped place an individual with no prior JavaScript developer experience in **Angular 18** front-end.

Calibraint Technologies Private Limited

Oct 2021 – May 2023

Associate Software Developer

Chennai, India

- Spearheaded the agile development of a client-tailored procurement, sourcing & analytics software using **MEAN** stack.
- Managed a team of 5 developers, resulting in successful and timely development and delivery of **multiple projects**.
- Planned sprints, user stories, completed them within stated deadlines and guided the team for the same as **scrum master**.
- Improved project's performance and stability, achieved **60% speed improvement** and **70%** reduction in **server crashes**.

Awards

Star Performer – Web Team, for producing quality & timely delivery, onboarded & trained new members; Calibraint

Mar 2023

The Eccentric Performer – Web Team, efficiently coordinated three different projects simultaneously; Calibraint

Jan 2023

Projects

PneumoNetFusion – Chest X-Ray Pneumonia Detection using Ensemble CNN Network

Jan 2024 - Apr 2024

- Performed **dataset sourcing, clean-up and image augmentation** to improve accuracy and specificity of the TensorFlow model.
- Utilized **generative adversarial networks (GANs)** to generate synthetic chest X-ray images for forming a customized dataset.
- Successfully demonstrated an ensemble model consisting of a custom CNN and existing CNN models with an **accuracy of 92%**.

Improveo – Professional Social Media for Consulting Firms

Feb 2022 - May 2023

- Implemented core modules of the application from scratch including **chat plug-in, SSR rendering and 3rd party integrations**.
- Built the application with an SEO-centric approach; **Improved application load speed by 30%** using compression techniques.
- Provided code enhancements, bug fixes and timely support for resolution of production incidents as a core team member.

Contactless AI-based COVID-19 Screening System

Feb 2022 - May 2022

- Prototyped a contactless temperature screening and **AI-based face mask detection system** using TensorFlow & Raspberry Pi.
- Developed HW integration code to interact with the MLX90614 temperature sensor, webcam and the other active hardware.
- As an active team member, helped plan future enhancements such as reinforcement learning and third-party integrations.

Plant Disease Classification using CNN and DenseNet201 – Comparative Study

Aug 2021 - Nov 2021

- Sourced PlantVillage dataset, performed clean-up and pre-training image augmentation to improve accuracy and specificity.
- Designed a custom convolutional neural network and a DenseNet201 transfer learning network for comparative study.
- Achieved an **overall accuracy of 95% ($\pm 2\%$)** in classifying images belonging to 38 classes; published results in IRJET journal.