

Suryakumar P

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Summary

Software Developer with experience in **AI services, IoT, and cloud technologies**, actively building expertise in **back-end development**. Skilled in **Python, Java, and modern frameworks**, with hands-on projects in **scalable applications, IoT systems, and cloud deployment on Azure and AWS**. Passionate about solving real-world problems and continuously learning emerging technologies like **AI/ML, cloud computing, and embedded systems**

Skills

Programming Languages: Python, Java, C++

Cloud & DevOps: Microsoft Azure, AWS, Docker, Grafana

AI/ML Tools: Azure OpenAI, LangChain, Azure Custom Vision, MongoDB

Web/App Development: ReactJS, Django, FastAPI, Android Studio (Java)

Hardware & Microcontroller: ESP8266, ESP32, Arduino, Raspberry Pi, MQTT, NodeRED

Databases & Version Control Tools: MySQL, MongoDB, Git, GitHub

Projects

AI-Based Automatic Answer Script Evaluation System

Technologies Used: Azure OCR, Azure AI Foundry (GPT-4o), MongoDB

- Developed an AI agent to evaluate theory answer scripts by extracting text using **Azure OCR** and comparing it with the answer key stored in **MongoDB**.
- Leveraged **Azure OpenAI** for semantic evaluation, achieving **90% accuracy** in grading.

Intruder Detection and Alerting System

Technologies Used: Azure Face API, Azure Blob Storage, Power Automate, Python

- Designed a high-impact security system to detect and alert unauthorized personnel in restricted areas.
- Received appreciation from the University's Office of Student Welfare and is being implemented in high-security zones like the **Exam Control Room**.
- Automated security reports using **Power Automate**, reducing manual effort by **40%**.

Personal Diet Recommendation Chatbot

Technologies Used: Azure AI Foundry (GPT-4o), MongoDB, LangChain

- Built a chatbot to provide personalized diet recommendations using **Azure AI Foundry (GPT-4o)** and **MongoDB** for storing Indian food nutrient data.
- Achieved **85% user satisfaction** by offering tailored diet plans based on user preferences.

IoT-Based Pulse Oximeter Monitoring and Alerting System

Technologies Used: MAX30102, ESP32, MQTT, Grafana, Twilio

- Developed a system to monitor oxygen saturation levels using **MAX30102** and **ESP32**.
- Integrated **MQTT** for data transmission and **Twilio** for real-time alerts during abnormal readings.
- Ensured real-time health monitoring with **Grafana dashboards**, enabling proactive intervention.

Education

Vellore Institute of Technology, Chennai, M.Tech (Integrated) Software Engineering

Sept 2021 – Present

- CGPA: 8.73/10.0

• **Coursework:** Software Engineering, Agile, Project Management, IoT

Kshatriya Vidhyasala Matriculation Higher Secondary School

Sept 2019 – July 2021

- SSLC: 89.6%, HSC (PCM with Computer Science): 92.3%

• **Coursework:** Computer Science, C++, SQL, Python

Certifications

- **Microsoft Certified: Azure AI Fundamentals (AI-900)** Issued by Microsoft, 2023
Link: <https://bit.ly/SuryakumarAzureAI/>
- **Google Cloud Arcade** Issued by Google Cloud, Qwiklabs, 2022 and 2023
Link: <https://bit.ly/SuryakumarGCP/>
- **Technical Support Fundamentals** Issued by Coursera and Google, 2021
Link: <https://bit.ly/SuryakumarCourseraTSF/>

Achievements and Awards

- **Runners-Up, TechnoVIT Hackathon 2024**
Designed "VOLT," a smart home electricity monitoring app. Won a cash prize and certificate.
- **Finalist, International UI/UX Competition 2024**
Ranked among the top 20 out of 75 teams from 6 countries at Universiti Putra Malaysia and Carlo Rino.
- **Finalist, VITISH 2024 & SIH 2024**
Ranked 21st out of 548 teams, earned wild card entry for Startup Support & Venture scheme.
- **Runners-Up, Krypton Hackathon 2023**
Designed "Xpense," an app for managing payments and NFC cards. Won cash prize Rs. 50,000 and a TWS headset.

Publications and Patents

- **Parallel Implementation of Decision Tree for Online Fraud Detection**
Presented at IEEE IH CSP 2024.
- **A Device and Method for Facilitating Personal Security of a User**
Patent Published (202441060793), 2024.
- **RFID Handshake – Smart Contactless Networking**
Patent Application (Under Review), 2024.
- **Comparison of Emotional Analysis Chatbots using Open-Source LLMs**
Under Review at IEEE INCET 2025

Experience

- **LLM-Ops Engineer**
Nurtem (Remote) Fremont, California, United States
Dec 2024 – Feb 2025
- Built a system to generate HOTS based MCQs using **Azure AI Foundry** and **LangChain**.
- Enabled users to upload PDFs and automatically generate MCQs, reducing manual effort by 50%.
- **Frontend Web Dev Intern**
Aerobiosys Innovations Private Limited Chennai, Tamil Nadu, India
Nov 2023 – Dec 2023
- Revamped the UI for a ventilator system, enhancing aesthetics and usability.
- Developed a website to streamline ventilator connectivity and create a user-friendly dashboard.

Volunteering

- **Microsoft Learn Student Ambassador (MLSA) - Beta**
Jan 2024 – Present
- Hosted 10+ events, including seminars and stage talks on **Azure**, **Azure AI Services**, and **Azure AI Foundry**.
- Received swags from Microsoft and spoke at the **MLSA Summit** held at Microsoft's office.
- Built and managed a global community of 1.7K members.