J. KESHAV BHUPATHY VIGNESH

Software Engineer
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Result Oriented **Full Stack Software Developer** with **2.5+** years of hands on experience in **designing, developing, testing and maintaining backend system applications and Microservices, primarily in Python**, along with notable frontend development experience including building **Single Page Apps in Angular**

TECHNICAL SKILLS

Programming Languages	***Python**, Java*
Web Technologies	***FastAPI**, **Django**, Flask, **Angular**, HTML5, CSS, Javascript, **Markdown**, **Jekyll***
Database	***PostgreSQL**, MySQL*
Containerization Tools	***Docker**, Snapcraft*
Cloud Technologies	***Microsoft Azure Services including Azure DevOps***
Other tools and Frameworks	***RabbitMQ**, ZeroMQ, **Postman, SQLAlchemy,** Jenkins, Qt Designer, Robot Operating System (ROS)*

WORK EXPERIENCE

➢ **Senior Software Engineer, Wipro Limited** *December 2019 – Present*
Robotics Practice, Smart Machines, Chief Technology Office *Bengaluru, Karnataka, India*

- **Drafted System and Microservice architectures** for various projects and **worked with the Senior Architect** to finalize the same
- **Implemented** major parts of the finalised architecture including **the System Backend and APIs**
- Created various **REST APIs** using tools such as **FastAPI, Django Rest Framework (DRF) & Flask** and also automated testing using **Postman**
- **Developed Single Page Web Applications in Angular** and integrated the same with the API Backend
- **Designed Database Schemas and implemented** the same in **PostgreSQL**
- **Dockerized applications and/or created Python Distributions** based on need
- Setup and managed **Automated Build and Release Pipelines using Azure DevOps**
- **Created** detailed **architecture & design documents and test plans** for the solutions
- **Participated** in code reviews and **conducted sessions** on code quality and good software development practices
- **Key Projects:**
  - A multi-agent – drones and custom robots – based Autonomous Stocktaking solution that **reduces manual labour, improves Inventory Accuracy and reduces warehouse downtime**
  - **Worked on a Python based Software Development Kit (SDK) -** that can be used to prototype, test and deploy Multi level Orchestration systems for various Robotic use cases, agnostic of actual hardware. This SDK has **cut down the lead time of projects by almost 50%** and **simplified core application development**

➢ **Project Engineer, Wipro Limited** *July 2018 – November 2019*
Robotics Practice, Smart Machines, Chief Technology Office *Bengaluru, Karnataka, India*

- Implemented Multi level Orchestration systems and state machines in Python for Robotics Applications
- Created Web User Interfaces using **HTML5, Jinja2 Templating, Bootstrap and JQuery**
- Packaged applications as **Docker Images and/or Snap apps**
- Refactored legacy codebases to improve maintainability and ported modules in C/C++ to Python
- **Key Projects:**
  - **Implemented the State Machine based Orchestrator** for Optimal decision making in a mobile retail robot scenario
  - Developed a **GUI tool for a, previously manual, data collection and validation process** in Robot Calibration. The tool **reduced the overall process time from 3 hours to 30 minutes**
  - Created a **Web based control and monitoring system** for a retail robot scenario, which **improved application configurability and reduced setup time**

EDUCATION

B. Tech in Computer Science and Engineering *June 2014 – March 2018*
Vellore Institute of Technology (VIT), Chennai Campus *CGPA: 9.23 / 10.00*

PERSONAL PROJECTS

- **Wizard's Chess -** A physical chessboard that the user can play with, without the need of an opponent. The opponent pieces move by themselves. There are no visible moving mechanisms
- **Ecosense** – A Smart Home Energy Control and Management System
- A Game theoretical approach to prevent Network Congestion in sensor networks

LANGUAGES

English Tamil Malayalam

OTHER INTERESTS

Filmmaking Magic Visual FX Game Development