SHAFI S
Software Engineer | Backend Developer

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Summary

 An aspiring software engineer with a strong passion for software development and hands-on experience gained through a 6-month internship at Rockwell Automation. I specialize in Python development, with practical exposure to backend development using Django & FastAPI. I hold an MCA from TKM College of Engineering and a BCA from the University of Kerala. I am highly enthusiastic, self-driven, and committed to continuous learning, with a keen interest in advancing my expertise in python and backend development, while being fully ready to learn and work with any language or technology required to deliver value to the team and organization.

Work Experience

Rockwell Automation India pvt Ltd , Bengaluru   Feb 2025 - Aug 2025 (6 months)

Software Engineer Intern

- Contributed to the FactoryTalk Data Mosaix – PharmaSuite Integration project by developing and enhancing REST APIs using FastAPI, improving system reliability through effective bug fixing, exception handling, and validation.
- Actively tested APIs using Postman, identified edge cases, and implemented structured error handling to ensure consistent and predictable API behavior.
- Designed and developed FTDM PharmaSuite custom backend applications to address performance issues.
  - Earlier, 8 dashboards were deployed under a single service, causing performance bottlenecks.
  - Optimized the dashboard system by deploying separate backend services for each dashboard, enhancing performance and reducing load.
- Built a Python automation script to automate multiple API calls required for embedded app registration in PharmaSuite, replacing a manual, time-consuming, and error-prone process.
- Delivered the automation as a standalone executable, enabling the DevOps team to perform consistent, error-free setups while significantly reducing manual effort.
- Collaborated with mentors and team members, gaining exposure to professional development workflows, version control, and deployment practices.
- **Technologies & Tools:** Python, FastAPI, SQLAlchemy, PostgreSQL, Git, GitLab, Docker, REST APIs, Postman

Education

Master of Computer Applications (MCA)
TKM College of Engineering, Kerala
2023 - 2025
CGPA: 8.84 (88.4%)

Bachelor of Computer Applications (BCA)
UIT Mukhathala , University of Kerala
2020 - 2023
CGPA: 7.86 (78.6%)

Skills

Languages: Python, Java, C, JavaScript, SQL
Backend Frameworks: FastAPI, Django, Flask, Django REST Framework
Frontend : HTML, CSS, Bootstrap
Technologies & Tools: Git, Github, Docker, Postman, SQLAlchemy, AWS (EC2 & S3), REST APIs, PostgreSQL, MongoDB, Pytest, CI/CD ,Data Strucures & Algorithms, Machine Learning
Soft Skills : Communication, Team Collaboration, Continuos Learning, Mentoring, Adaptability, Problem solving

Project Work

BlogSquare – A Blogging System | Live Demo | Source Code

- Implemented user authentication and registration, including secure login/logout, password management, and automatic assignment of new users to the User group.
- Designed role-based access control (Admin, Editor, User), where Admin manages editor permissions and category assignments, and Editors manage blog content.
- Developed content management features: CRUD operations for posts and categories, enabling Editors to create, edit, and publish blogs efficiently.
- Integrated interactive functionalities such as commenting, category-based filtering, and search, along with a responsive, SEO-friendly frontend using Bootstrap and Django templates.
- Deployed on PythonAnywhere, demonstrating full project ownership; enhanced skills in Django authentication, role management, web deployment, frontend-backend integration, and full-stack application development.
- Tools & Libraries: Python, Django, Bootstrap, HTML, CSS, SQLite, Git.

Sign Language Recognition System | Source Code

- Developed a real-time system to recognize ASL hand gestures and assist deaf/mute individuals.
- Collected a custom dataset of 52,000 images using a laptop webcam and OpenCV.
- Built and evaluated multiple deep learning models (CNN, VGG16, InceptionV3) and deployed the highest-performing model.
- Created a real-time interface with customTkinter for instant gesture recognition.
- Tools & Libraries: Python, OpenCV, TensorFlow, NumPy, customTkinter, Kaggle, Google colab

White Blood Cells Classification

- Implemented a White Blood Cells (WBC) classification system using transfer learning on pre-trained CNN models.
- Trained and fine-tuned the model to classify four WBC types: Neutrophils, Lymphocytes, Monocytes, and Eosinophils.
- Evaluated model performance using metrics like accuracy, precision, recall, and confusion matrix, achieving high classification accuracy.
- Applied transfer learning techniques to reduce training time while leveraging pre-trained features for better generalization.

Certifications

- IBM Full Stack Software Developer Professional Certificate
- The Complete FastAPI course with OAuth & JWT Authentication.
- Python for Data Science, AI & Development - IBM '
- Django Application Development with SQL and Databases
- Problem Solving through Programming in C, IIT Kharagpur.
- Introduction to Internet of Things, IIT Kharagpur

Academic Achievements

- Secured 83rd rank in the State-Level MCA Entrance Examination conducted by LBS Centre for Science & Technology, Kerala