Aswin N Software Engineer

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github.com/in/aswin-n

Profile Summary

Software Developer with 9 months of practical experience in Python and Django through internships. Bachelor's degree in Electronics and Communication Engineering, with a solid foundation in hardware technologies. Continuously practiced and refined programming skills since the third year of college. Demonstrated expertise in optimizing performance, enhancing functionality, and improving system efficiency across diverse projects. Highly motivated to drive innovation, embrace new technologies, and tackle new challenges in a dynamic team environment. Eagerly awaiting the opportunity to shine in my next role.

Professional Experience

Embedded Software Engineer   September 2024 – present │ Bengaluru, India
Fracktal Works Private Limited

- Developing and enhancing **Graphical User Interfaces (GUIs)** using **PyQt5** for intuitive interaction with 3D printing systems.
- Working on **3D printing slicing software**, contributing to the design, optimization, and troubleshooting of advanced 3D printing operations.
- Designing and implementing backend functionalities for applications using **Django** and **Jinja2** templates, focusing on performance optimization and scalability.
- Collaborating with cross-functional teams to integrate 3D printing software features, ensuring seamless functionality from front-end to back-end.
- Ensuring **code quality, scalability, and security** in backend development by writing clean, maintainable, and efficient Python code.
- Actively participating in the development cycle, including **debugging, testing**, and deploying new features for embedded and 3D printing systems.
- Utilizing **Python** for both software development and integration of **embedded systems** with the company's 3D printing technologies.
- Contributing to the **continuous improvement** of internal processes by developing automation tools and improving software performance.

Internship Experience

Python Full Stack Developer Intern   July 2024 – September 2024 │ Chennai, India
Shiash Info Solutions Private Limited

- Contributed to software application development and maintenance using Python.
- Supported all phases of the software development lifecycle, including planning, design, implementation, and deployment.
- Enhanced programming skills through active learning and practical experience in Python development.
- Participated in unit-testing and debugging to ensure application robustness.

Software Developer Intern   February 2024 – June 2024 │ Chennai, India
Cyber Heals Infotech Private Limited

- Contributed to software application development and maintenance using Python.
- Supported all phases of the software development lifecycle, including planning, design, implementation, and deployment.
- Enhanced programming skills through active learning and practical experience in Python development.
- Participated in unit-testing and debugging to ensure application robustness.

Python Developer & Data Science Intern   December 2023 – January 2024 │ Remote
Techno hack Edutech Pvt Limited

- Implemented Python code for applications, contributing to the full project lifecycle from planning to deployment.
- Developed a uniform detection system for employees in Python, managing data preprocessing, feature engineering, and model evaluation.
- Demonstrated strong technical abilities, effective time management, and adaptability to diverse project requirements.
- Adopted industry best practices for code quality and documentation.

Projects

Guidotronic Bot Integrate with LiDAR and AI Voice Assistance

- Developed a robotic system with LiDAR technology and AI voice assistance for autonomous navigation and voice control.
- **Technologies Used:** Python, LiDAR, AI Voice Assistance, Embedded Systems.
- **GitHub Repository:** Guidotronic Bot

Find Me Application

- Developed a versatile GUI application using Tkinter for automated order management, integrating Openpyxl to replace manual Excel data entry with real-time data handling and instant product information retrieval.
- **Technologies Used:** Python, Tkinter, Openpyxl, Excel Automation, GUI Development

- **GitHub Repository:** Find_Me_App

Portfolio Website with Secure Login System
- Developed a personal portfolio website with a secure login system to showcase projects, skills, and experience.
- **Technologies Used:** Django, Python, HTML, CSS, JavaScript, MySQL.
- **GitHub Repository:** Portfolio Website

Job Search Web Application
- Created a job search web application for employers to post job openings and for job seekers to search and apply for jobs.
- **Technologies Used:** Django, Python, HTML, CSS, JavaScript.
- **GitHub Repository:** Job-Board

Feedback Form with Voice Recording
- Developed a feedback form with form validation and voice recording, enabling audio feedback to be saved directly to a MySQL database and displayed on the dashboard, utilizing HTML, CSS, JavaScript for the frontend, and Python with Django for the backend.
- **Technologies Used:** HTML, CSS, JavaScript, Python, Django, MySQL
- **GitHub Repository:** Feedback_form

Uniform Detection System
- Developed a uniform detection system using OpenCV that automatically identifies non-compliant employees by detecting the company logo on their attire, recording absence and applying fines to enforce dress code policies.
- **Technologies Used:** OpenCV, Python, Image Processing, Computer Vision
- **GitHub Repository:** Uniform_detection

Professional Skills

Industry Skills
- **Software Development:** Programming, System Design, Implementation | **Web Application Development:** Front-End & Back-End Development, Responsive Design | **Python Django Developer:** Python Programming, Django Framework, API Development

Technical Skills
- **Programming Languages:** Python, C, C++ | **Frameworks & Libraries:** Django, Flask, Qt, Standard Template Library (STL), NumPy, Pandas, Matplotlib, Seaborn, Requests, BeautifulSoup, Tkinter | **OOP Concepts:** Encapsulation, Inheritance, Polymorphism, Abstraction | **DSA:** Array Sorting, Searching, Two Pointers, Sliding Window | **Front-End Technologies:** HTML, CSS, JavaScript | **Databases:** MySQL | **Cloud:** Heroku, Vercel, Getify, Kubernetes | **CI/CD Tools:** Docker, GitLab CI/CD | **Version Control:** Git, GitHub | **Development Tools:** PyCharm, VS Code, PyQt5 Designer, Cura, Fusion 360, Visual Studio, Embedded IDEs, Code Blocks | Software **Development Life Cycle (SDLC):** Agile | **Operating Systems:** Windows, Kali Linux, Linux

Additional Skills
- Advanced Excel | REST API Development | Web Scraping | GUI Development | MS Office | Unit Testing | **Microcontrollers:** Arduino Uno, ESP32 | **Hardware Design**: Circuit Design, PCB Layout, Embedded System Design | 3D Printing

Soft Skills
- Strong Problem-Solving & Analytical Skills | Excellent Verbal & Written Communication | Team Collaboration & Leadership | DetailOriented & Quality-Focused

Education

Bachelor of Engineering (B.E.) in Electronics and Communication Engineering	2020 – 2024	Nagercoil, India
Stella Mary's College of Engineering	
CGPA: 8.32	

HSC in Maths & Biology	2019 – 2020	Nagercoil, India
Devi Higher Secondary School	
Percentage: 80%	

Secondary School Leaving Certificate (SSLC)	2017 – 2018	Nagercoil, India
St.Francis Xavier's High School	
Percentage: 94%	

Additional

- **Courses:** 1. Python Programming **(GUVI)** | 2. Python and Django for Beginners **(Udemy)** | 3. Python Libraries for Data Science **(Simplilearn)**
- **Certificates:** 1. Back-End Engineering Virtual Experience Program **(LYFT- 27-07-2023)** | 2. Software Engineering Virtual Experience Program **(WELLS FARGO - July 5, 2023)** | 3. Software Development Virtual Experience Program **(DATACOM - 11-062023)**
- **Publications: Title:** An Innovative Guidotronic Bot with Integrated LiDAR and AI Voice Assistance | **Published in:** IIJSR | **Date:** May 15, 2024 | **Certificate Link:** View Certificate
- **Languages:** English | Tamil | Malayalam