# **Basil Binu**

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#### **OBJECTIVE**

Highly motivated Software Developer with expertise in Python, C++, and Java. Hands-on experience in fullstack development, machine learning, and web technologies like HTML, CSS, and JavaScript. Proficient in working with databases like MySQL.

• Programming Languages: Python, Java, C

- AI/ML Frameworks: TensorFlow, PyTorch,
- Data Analysis & Preprocessing: Pandas, NumPy
- Development Tools: Git, VS Code, PhpMyAdmin
- Web Technologies: HTML, CSS, JavaScript
- Databases: MySQL,
- Additional Skills: OOP Concepts, Excel Proficiency, Agile Methedologies

#### PROFESSIONAL EXPERIENCE

**CORE COMPETENCIES** 

### **NeST Cyber Campus Cyber Security Intern**

Collaborated in an Agile environment to enhance cloud infrastructure security, implementing automation for monitoring using Bash/Shell scripting. Troubleshot and resolved technical issues in cloud systems, contributing to enhanced system stability and security.

**PROJECTS** 

Apr 2023 - Aug 2023

## **Backlog Tracker**

Technologies: PHP\_MySQL, HTML, CSS

Designed a full-stack web application that tracks student academic backlogs, integrating data storage and management through MySQL. Automated deployment processes through CI/CD pipelines for seamless application updates and bug fixes.

## Parkinsights - GitHub

Feb 2024 - May 2024

Technologies: Jupyter Notebook, Python, Flask, Pandas, CSS

Developed a machine learning model to predict Parkinson's disease using data pre-processing techniques and feature engineering. Integrated a Flask-based API to deploy the model with a responsive front-end, ensuring real-time interaction for end-users. Optimized performance through neural networks and ensured continuous integration with Git and an automated CI/CD pipeline.

#### Al Engineering Assignments – Image Processing & LLM Automation

June 2025

GitHub: github.com/basi1l

Built an RGB-Thermal Overlay pipeline (Task 1) to combine aerial RGB and thermal images using OpenCV, automating batch alignment and visualization for damage inspection.

- Technologies: Python, NumPy, OpenCV

Implemented a Change Detection system (Task 2) to identify missing/damaged structures by comparing aligned image pairs using thresholding, blurring, and contour analysis.

- Output: Bounding-box overlays on missing elements

Designed a Streamlit-based GLR Generator (Task 3) integrating OpenRouter LLMs to fill insurance templates (USAA, Wayne, GuideOne) from PDF photo reports.

- Technologies: Python, Streamlit, PyMuPDF, docx, OpenRouter API
- Supports auto template detection, LLM field extraction, and downloadable .docx output.

## **EDUCATION**

**Bachelor of Technology in Information Technology** 

Rajagiri School of Engineering and Technology — Kerala, India November 2020 - July 2024

CGPA: 8.25

**XII - Computer Science** 

Cardinal HSS Thrikkakara — Kerala, India

July 2018 - May 2020 Percentage - 94.08

### **CERTIFICATIONS**

Git and GitHub Workshop – Rajagiri School of Engineering and Technology Capacity Building for Innovation Program – STEAG Completed Messenger Chatbot using Chatfuel.

Al Engineer - One Roadmap Skill Certification.

# PROFESSIONAL DEVELOPMENT 30-Hour Python Developer Training Course (Ongoing)

Key Topics Covered: Python fundamentals, data structures, object-oriented programming (OOP), automation scripts, and web development basics.