Thilakshana Weerasinghe

Python Developer

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GitHub : Click-me
Web : Click-me
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SKILLS

- JavaScript, HTML5, CSS3
- Django, Flask, Mern
- MySQL, MongoDB, SQLite, PostgreSQL, MongoDB
- Git, **GitHub** and Version Control
- RESTful API Development (Django)
- Python Automation and Web Scraping
  Selenium, beautiful soup
- Graphic design
- Problem solving

EDUCATION

Bachelor of Science (IM), *Undergraduate* Sri Lanka Institute of Information Technology (SLIIT), Malabe, Sri Lanka.

CERTIFICATIONS/LICENSES

- Completed **100 Days of Code – Python Bootcamp (Udemy)** one of the most comprehensive Python courses on the web, covering real- world projects, automation, APIs, and OOP.
- AI/ML stage 1 -SLIIT
- completed 15 Digital Marketing certifications (Link) *Google Skill Shop*
- Marketing and digital strategy Certifications (Link) *HubSpot*

SUMMARY

Aspiring Full Stack Developer actively looking for opportunities to apply and grow my skills in real-world projects. I've completed 50+ Python projects through the *100 Days of Code* challenge and multiple full-stack web apps using Django, Flask, and Mern. I'm passionate about creating smart, scalable web applications and have a strong interest in integrating AI/ML into web solutions. I enjoy writing clean, maintainable code and thrive in collaborative, innovative environments.

PROJECTS AND SKILLS

Skills from 100 Days of Code – Python Bootcamp (Udemy)

Core Python Programming

- Variables, data types, and operators, Control flow (if/else, loops), Functions, parameters and return values | Error handling (try/except) | File handling (read/write, CSV, JSON)

Object-Oriented Programming (OOP)

- Classes, objects, methods | Inheritance, polymorphism, encapsulation |Working with Python modules and packages

Data Structures & Algorithms

- Lists, tuples, sets, and dictionaries | Sorting, searching, and recursion basics | Algorithmic problem solving

Intermediate Python

- List comprehensions and generators | Decorators & higher-order functions | Lambda functions & map/filter/reduce | Iterators & context managers

Modules & Libraries

- Random, datetime, math | OS and shutil (system operations) | Requests (HTTP requests) | smtplib (email automation)

Web Development

- Flask web framework basics | REST APIs with Flask & Django | HTML/CSS integration with Python | Jinja templating

Data Science & Visualization

- Pandas, NumPy | Matplotlib, Seaborn | Data analysis and cleaning

Automation & Scripting

- Selenium for browser automation | BeautifulSoup for web scraping | Automating tasks (emails, PDFs, Excel)

Databases

- SQLite and PostgreSQL basics | CRUD operations |Connecting Python to databases

Game Development

- Turtle graphics | Tkinter GUI | Beginner-level game projects (Snake, Pong, Blackjack)

Advanced Topics

- API consumption and creation | Authentication (OAuth, JWT basics) | Regular Expressions (Regex) | Working with JSON & CSV in real-world apps

Version Control & Deployment

- Git/GitHub for version control | Virtual environments & pip | Deploying apps (Heroku basics, local servers)

LeetCode Problem Solving Practice – Self Learning
Tech Stack: Python
Link: Leetcode

- Practicing coding challenges on LeetCode as part of continuous learning and skill development.
- Improved ability to translate real-world problems into algorithmic solutions using Python.
- Strengthened understanding of time and space complexity while solving beginner-mid level challenges.

Fitness Cartel Web App – Academic Y2S2 Project
Tech Stack: MongoDB, Express.js, React.js, Node.js (MERN Stack)

- Developed as part of the Web Application Development module, with core features focused on real-time user interaction and health tracking.
- Personally built the BMI Calculator and Task Management features with a focus on logic accuracy and responsive UI.
- BMI Calculator offers intuitive input fields and calculates live BMI with meaningful health feedback based on standard weight categories.
- Task Manager allows users to add, update, and delete daily workout or fitness tasks, using dynamic React states and MongoDB for data persistence.
- Backend built with Node.js + Express.js, providing secure RESTful APIs for task and BMI data, connected to MongoDB.

Final year research project – Academic Y4S1 (Ongoing)
Tech Stack: Unity, C#, computer vision, LLM, Generative AI

- Developing a Mix Reality-based reading companion to Meta quest 3 that detects book/page interactions using **computer vision** and synchronizes content with immersive **Unity/C#** applications.
- Integrating **OCR + LLMs** for real-time summarization, enrichment, and adaptive scene generation via **Generative AI**.
- Implementing seamless **Meta Quest 3 VR/MR headset integration** for delivering 360° immersive reading experiences.
- Focus on enhancing comprehension, engagement, and memory retention in education through immersive mixed-reality learning.

SLIIT – CodeFest 2025 – Datathon Urban Challenge
Tech Stack: Python, OpenCV, TensorFlow/Keras, NumPy, Pandas, Matplotlib, YOLO8
Domain: Computer Vision & Image Classification
Links: Datathon Urban Challenge

- Designed and implemented a **multi-label image classification system** to detect and categorize urban issues such as potholes, littering, illegal parking, and vandalism from uploaded images.
- Integrated **privacy-preserving preprocessing** using OpenCV to anonymize personal identifiers (faces, license plates) before training and inference.
- Built and trained **deep learning models** to classify issues into main and sub-categories, with support for detecting multiple issues within a single image.
- Conducted **data acquisition and cleaning** from multiple public datasets, augmenting and balancing categories for improved model performance.
- Developed **evaluation metrics** to assess accuracy, classification robustness, and anonymization effectiveness, aligning with competition judging criteria.

Study Buddy – Full stack project
Tech Stack: HTML5, CSS3, TensorFlow, Dialog flow, Django Link: Study Buddy Repository

- Implemented Django **templating and view logic** to deliver dynamic content and provide a user-friendly interface for academic support.
- Managed routing, form handling, and data flow between the chatbot and frontend, ensuring a smooth and scalable user experience.
- backend optimization and ensured clean, maintainable code aligned with Django best practices.

Personal Web Project - Visit
Tech Stack: HTML5, CSS3, JavaScript, Flask
Links: Personal Web Repository

- Designed and developed a personal portfolio website to professionally showcase projects, designs, and development work.
- Created a visually appealing and responsive frontend using HTML5, CSS3, and JavaScript to display project cards, interactive elements, and smooth navigation.
- Utilized Flask as the backend framework to manage routing, handle form submissions, and dynamically render project content using Jinja templating.