SHAHILA SHIFANI

Aspiring AI / Machine Learning Engineer | Python · NLP · Generative AI · Data Analytics
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LinkedIn | GitHub | Portfolio

PROFESSIONAL SUMMARY

Year 4 BSc (Hons) Software Engineering undergraduate at Saegis Campus building a foundation in Artificial Intelligence, Machine Learning, Natural Language Processing and Generative AI. Developing portfolio projects in text classification, resume analysis, predictive modelling and Retrieval-Augmented Generation, supported by a software engineering background in Python, SQL, REST APIs, testing and Git. Merged open-source contributor and undergraduate researcher seeking AI Engineer, Machine Learning and AI & Automation internships.

TECHNICAL SKILLS

Programming: Python, SQL, PHP, JavaScript, HTML, CSS
AI & Machine Learning: Machine Learning Fundamentals, Natural Language Processing (NLP), TF-IDF, Text Classification, Model Evaluation Fundamentals, Generative AI, Large Language Models (LLM concepts), Prompt Engineering, Retrieval-Augmented Generation (learning)
Python & Data Analysis: Pandas, NumPy, Matplotlib, Scikit-learn (fundamentals), Jupyter Notebook, Data Cleaning, Exploratory Data Analysis (EDA), Data Visualisation, Statistical Analysis Fundamentals
APIs & Databases: FastAPI (fundamentals), Flask (fundamentals), REST APIs, MySQL, Node.js (fundamentals)
Business Intelligence: Microsoft Excel, Power BI (learning), Power Query, DAX (learning), SQL-based data analysis
Testing & Tools: pytest, Functional Testing, Regression Testing, Debugging, Git, GitHub, GitHub Actions, Postman, MySQL Workbench

AI AND MACHINE LEARNING PROJECTS

ResumeIQ-AI | AI-Powered Resume Analysis — Developed
Technologies: Python, NLP, TF-IDF, Cosine Similarity, FastAPI, pytest | GitHub
- Building an NLP application that helps students and job seekers assess how well a resume matches a job description and identify missing skills.
- Designing a Python pipeline for PDF/DOCX text extraction, text preprocessing and skill extraction from resumes and job descriptions.
- Planning TF-IDF and cosine-similarity job matching, with later exploration of text embeddings and LLM-generated career insights.
- Organised the repository into parser, NLP, matching and API modules with dedicated notebooks, tests and documentation folders.

SpamGuard-AI | Machine Learning-Based SMS Spam Classification System — Developed
Technologies: Python, Pandas, NLTK, Scikit-learn, TF-IDF, FastAPI | GitHub
- Developing an NLP classifier that labels SMS messages as spam or legitimate, covering the full machine learning workflow from dataset analysis to prediction.
- Working on text preprocessing and TF-IDF feature extraction to convert raw messages into numerical features for Scikit-learn models.
- Planning model evaluation using a confusion matrix, precision, recall and F1-score, plus a FastAPI endpoint for real-time predictions.

DocuMind | AI-Powered Document Knowledge Assistant (RAG) — In Development
Technologies: Python, FastAPI, LLM APIs, Embeddings, FAISS / ChromaDB, Streamlit
- Planned Retrieval-Augmented Generation assistant that lets users upload PDF documents and ask questions answered from the document content.
- Scope covers text extraction and chunking, embedding generation, vector similarity search and context-grounded LLM answers.
- Design includes source document references and unknown-answer handling to reduce hallucination.

Student Performance Analysis and Prediction — Developed
Technologies: Python, Pandas, NumPy, Matplotlib, Scikit-learn, Streamlit
- Completed data cleaning, exploratory data analysis and Matplotlib visualisation of student performance data to identify patterns and relationships.
- Extending the analysis into predictive modelling: feature engineering, training and comparing Scikit-learn models, and evaluating results.
- Planning a Streamlit interface for student performance predictions.

ADDITIONAL PROJECTS – DATA ANALYTICS

Sales Performance Analytics Dashboard Developed

Technologies: Power BI, Microsoft Excel, SQL, Power Query, DAX

- Planned interactive business intelligence dashboard analysing sales, revenue, profit and profit margin by month, year, region and product category.
- Scope covers data preparation in Power Query, DAX measures, SQL-based analysis, interactive filters and written business insights.

Customer Shopping Behavior Analytics | Python & Power BI

Technologies: Python, Pandas, SQL, Power BI, Excel

- Performed data cleaning and exploratory data analysis on customer shopping data to examine purchasing patterns and spending trends.
- Used Python and SQL to analyze customer segments, purchase frequency and product category preferences.
- Developed an interactive Power BI dashboard to visualize customer behavior and communicate business insights.

HR Employee Attrition Analytics | HR Data Analysis

Technologies: Python, Pandas, SQL, Power BI, Excel

- Conducted exploratory data analysis on employee data to investigate attrition patterns across departments, job roles and employee characteristics.
- Applied data cleaning, statistical analysis and visualization techniques to identify workforce trends.
- Created an interactive Power BI dashboard to present HR analytics findings and support data-driven decision-making

RESEARCH EXPERIENCE

CGU AI-Enhanced Career Guidance Research Ongoing

- Investigating AI-driven career recommendation approaches based on student skills, interests and academic backgrounds.
- Exploring Generative AI and prompt engineering for personalised, AI-assisted career guidance and student decision-making.

RSA Encryption and Cybersecurity Research *2026*

- Studied RSA encryption, prime-number applications in cryptography and data protection in secure digital banking; presented at the Saegis International Research Conference, July 2026.

Human-Computer Interaction Research *2025*

- Researched usability, accessibility and website interaction quality in Sri Lankan IT systems; presented at the Saegis Undergraduate Research Symposium, July 2025.

PROFESSIONAL AND SOFTWARE DEVELOPMENT EXPERIENCE

Career Guidance Unit (CGU) Web Application | University Project *Developed* *2025 – 2026*

- Implemented backend CRUD operations and MySQL database integration using PHP.
- Developed application features using JavaScript and REST API concepts; supported administrative workflows.
- Performed functional testing, debugging and validation of system components.

Saegis Campus University Website | Software Engineering Team Project *In Development*

- Developed responsive frontend layouts, faculty landing pages and reusable UI components; supported admin panel development (PHP, Laravel, JavaScript, Bootstrap, MySQL).
- Collaborated with team members using Git and GitHub.

Banking Associate Trainee | Nations Trust Bank PLC

2021

OPEN-SOURCE CONTRIBUTIONS

Eagle – Real-Time Semantic Surveillance

- Contributed merged pytest edge-case unit tests (empty event sequences, duplicate action compression) and ActionClassifier regression tests; added Google-style docstrings.

Agent-DID

- Contributed a merged Node.js SDK quickstart example (identity creation, request signing and verification) and a Python CI/CD workflow improvement using GitHub Actions and Ruff linting.

EDUCATION

BSc (Hons) Software Engineering *Nov 2023 – Nov 2027 (Expected)*

Saegis Campus, Sri Lanka | Year 4 Undergraduate

CERTIFICATIONS

Completed: Google Cloud Arcade Facilitator Program – Create Your First Gemini Enterprise Application (Jun 2026); AWS Academy Graduate – Cloud Security Foundations (May 2026); Microsoft AI Skills Fest 2026 Badge; Full Stack Web Developer and Python Programming – University of Moratuwa

Additional Learning: Google Machine Learning Crash Course; Google Cloud AI and Cloud Skill Badges; AI for Everyone – DeepLearning.AI; Microsoft Learn Azure Fundamentals Learning Path; Prompt Engineering Basics; Introduction to Git

In Progress: Azure AI Fundamentals (AI-900); AWS Cloud Practitioner; Google Data Analytics

TECHNICAL COMMUNITY AND LEADERSHIP

- Microsoft Learn Student Ambassador – technology learning and community engagement focused on Microsoft and AI programmes.
- Google Developer Groups (GDG) and GDG Sri Lanka member.
- Saegis Code Plus Hackathon participant (2024, 2025) – 24-hour Agile-style team sprints building working prototypes.

REFERENCES

Available upon request.