# SEP AMINIAN

Linkedin: https://www.linkedin.com/in/amirsepehr-aminian/ Location: London, UK
Contacts: +447878807771 amirsepehr.aminian@gmail.com

## SUMMARY

Dynamic Software Developer and Machine Learning Engineer with a proven track record in delivering innovative AI-driven solutions, optimising performance, and automating processes to drive measurable business impact. Skilled in NLP, machine learning, and full-stack development, with a passion for solving complex challenges through cutting-edge technologies.

## EXPERIENCE

**Software specialist Associate - Evelyn Partners** Jun. 2024 - Present
*London, United Kingdom*

- Development of a performant end-to-end machine-learning solution to leverage GPT-4o with LangChain in an Azure micro-service environment to help with core business reporting tasks to reduce time spent for delivery by more than 20 hours per engagement reducing the costs by £2.8m per annum.
- Designed and implemented a robust process for monitoring and automating model performance updates, ensuring continuous optimisation and efficiency.
- Leveraging my expertise in Python and JavaScript and cloud technologies to offer strategic guidance and implement efficient software solutions that align with industry best practices for various use cases in the professional services.

**Software specialist - RSM UK** Mar. 2023 - May 2024
*London, United Kingdom*

- Worked as a part of a wider team to incorporate Microsoft Copilot into the business by designing detailed use case scenarios and integrating considerations on privacy policies and data sharing as well as accuracy.
- Collaborated closely with cross-functional teams, facilitating seamless integration of software systems, and ensuring smooth transitions through enhanced performance and productivity.

**Machine Learning Engineer - Definely** Apr. 2022 - Mar. 2023
*London, United Kingdom*

- Demonstrated proficiency in effectively utilising the transformers library to fine-tune BERT, consistently attaining elevated F1 scores of 86% and 83% for ML text classification for scenarios for detecting defined terms and references in French and German.
- Designed, developed, and deployed a cloud-based ML text classification model with over 90% accuracy using XGBoost, Pandas, SciKit Learn, and Azure infrastructure.
- Spearheaded the creation of an efficient pipeline, optimising engineer productivity through labelled data management, repository oversight, and task automation.
- Initiated the launch of a website sandbox service, providing users with a free web-based product experience and collecting valuable data for future machine learning tasks using Django, MongoDB and React JS.

**Research and Teaching Assistant - University of Tehran** 2018 - 2021
*Tehran, Iran*

- Developed a desktop application for industrial robots providing control and real-time reporting of desired parameters whilst capturing the streamed data for future machine learning and data analysis tasks.
- Refactored multiple scientific projects derived from research papers from Matlab to Python for modular industrial-level application.
- Taught an overall of 400 students how to code using C++ as a teaching assistant. Also, a group of 40 taught the fundamentals of image processing and computer vision with Python.

## EDUCATION

**MSc. Artificial Intelligence with Distinction- Queen Mary University of London** Sept. 2021 - Sept. 2022

- **Details**: Graduated with Distinction

**BSc. Geomatics Engineering with Distinction- University of Tehran** Sept. 2016 - Feb. 2021

- **Details**: Minor in Computer Engineering. Graduated with Distinction

## SKILLS

- **Programming Languages:** Python, JavaScript, C++
- **Machine Learning:** PyTorch, TensorFlow, Keras, LangChain, HuggingFace, LLMs, Transformers, Scikit Learn, NumPy, Pandas, Matplotlib, NLTK, Spacy
- **Frameworks and technologies:** Node.JS, Express.Js, React.Js, Django, Azure cloud, MongoDB, SQL, Git, Docker
- **Soft Skills:** Project management, Communication, Analytical thinking, Teamwork, Independence.
- **Certifications:** Intro to Software Engineering(IBM), Machine learning Summer School 2023(OxML), Neural Networks and Deep Learning(Coursera), Python for Data Science(IBM)

## SELECTED PROJECTS

**Planning AI Assistant** Apr. 2024 - Present

- Created a pipeline to scrape data in 550 Local Authority websites to gather applications in PDF format with high reliability and store it in a file management system as a first base data source.
- Leveraged Flask and MongoDB Atlas to create a micro-service application to extract over 140 useful features from the PDF data by leveraging LangChain and Claude 3.5 Sonnet and prompt engineering.
- Created an AI assistant using Claude 3.5 sonnet and LlammaIndex RAG in Python to accurately answer planning questions and provide references.
- Developed a performant facet search engine to search through for relevant documents from scrapped data using Flask and Mongo DB.

**Multiple NLP tasks** Aug. 2022 - Mar. 2024

- Created a pipeline to recover LLM prompts using Gemma7b with a score of 0.68.
- Spearheaded the implementation of neural network solutions for a variety of NLP tasks, including Natural Language Modeling, Machine Translation, Named Entity Recognition, and Co-reference Resolution.
- Implemented the Seq2Seq Dialogue model with precision, closely adhering to the original paper's specifications. Demonstrated expertise in model development using TensorFlow Keras and PyTorch, incorporating ELMO and BERT for embedding layers. Explored attention-based methods and traditional LSTMs to enhance overall model performance across diverse projects.

**Several Computer Vision Tasks** Apr. 2022 - Apr. 2022

- I Implemented a vanilla version of GoogLeNet, VGG16 and ResNet DNNs based on the original papers for MNIST and CIFAR10 datasets.
- I implemented the SRCNN network for a convolutional super-resolution task. Also implemented Generative adversarial networks for an image generation task.
- I used PyTorch to implement and Google Colab GPUs to train and git for version control in these tasks.

**Assembling a Low Cost GPS Module** Sept. 2019 - Dec. 2019

- I designed and assembled a low-cost single-frequency GPS module for lightweight UAV aerial imaging. This was done using U-blox Neo M8 to receive the GPS signals.
- I utilised multiple correction algorithms to achieve better precision. All were initially developed in MATLAB and then refactored to Python.
- I used Arduino circuits along with Arduino IDE to program the additional memory and IO modules. To serve the postprocessing tasks