

Nikhil Subramanian

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EDUCATION

Master of Science in Game Development (Programming)

Jul 2024

[*Kingston University, London, UK*](#)

Bachelor of Technology in Electronics & Communication Engineering

Aug 2022

[*Vellore Institute of Technology, Vellore, IND*](#)

SKILLS

Technical Skills:

Python, TensorFlow, PyTorch, Scikit-learn, Keras, OpenCV, NumPy, R, SQL, REST API Development, OpenAI, Azure AI, AWS, MATLAB, Power BI, Git, Microsoft Office (Excel, Word, PowerPoint), C++, C#, C

Theoretical Skills:

Artificial Intelligence, Machine Learning, Deep Learning, Generative AI Model Training, Natural Language Processing (NLP), Computer Vision, Cloud Computing (AWS, Azure, GCP), Data Structures & Algorithms, Object-Oriented Programming, Debugging, Algorithm Design, Mathematics, Optimization Techniques, 3D Mathematics

Soft Skill:

Leadership Skills, Analytical Thinking, Agile Methodologies, Scrum, Problem-Solving Skills, Ability to Communicate Technical Ideas to Non-Technical Audiences, Teamwork, Critical Thinking, Project Documentation, Organizational Skills, Time Management, Attention to Detail, Adaptability, Continuous Professional Development

WORK EXPERIENCE

AI Model Trainer @ [Alignerr](#) (Remote)

Nov 2024 - Present

- **Generative AI Training:** Enhanced programming language generation models, achieving a 20% improvement in output quality through iterative training and dataset refinement using machine learning algorithms.
- **Dataset Management:** Designed and curated large datasets (images, text, conversations) with 95% data integrity, optimizing the inputs for **supervised learning** and **data augmentation**.
- **Model Reliability Analysis:** Provided actionable insights for **neural network** performance evaluation, reducing error rates by 10% and improving robustness in AI systems.
- **Scalability Optimization:** Resolved 80% of flagged performance issues, ensuring seamless deployment and distributed system scalability for large-scale AI applications.

AI Data Trainer @ [DataAnnotation Tech](#) (Remote)

May 2024 - Nov 2024

- **AI Model Evaluation:** Conducted advanced **data analysis and visualization** to identify trends, improving model precision by 10%, with an overall accuracy rate of 80%.
- **Debugging and Optimization:** Enhanced **deep learning models** by identifying and resolving coding errors, leading to a 20% improvement in programming logic and algorithm efficiency.
- **Chatbot Optimization:** Fine-tuned **natural language processing (NLP)** chatbot responses, improving user satisfaction metrics by 15%. Maintained 80% annotation precision, supporting **AI training pipelines** for dialogue systems.

Accounting Assistant (Part Time) @ [Alan Imports, Wandsworth, London](#)

May 2023 - Present

- **Data analysis:** Conducted thorough analysis of cash flow dynamics and financial data, pinpointing sales-related issues and offering strategic insights for resolution, resulting in a 10% increase in sales efficiency.
- **Logistic organisation:** Orchestrated seamless purchase and export processes for premium products, ensuring top-tier quality for UK and global clientele, leading to a 15% increase in customer satisfaction ratings.
- **File management:** Implemented user-friendly Google Drive platform for easy access to files and Excel documents, enhancing collaborative efficiency by 20% and optimizing workflow across departments.
- **Mentored** new team members through hands-on shadowing and guided practice sessions, leading to a 90% increase in productivity within the first month.

CERTIFICATIONS

Welcome to Game Theory

Jun 2020

Coursera (authorized by The University of Tokyo)

Verified: [J6WFKXFRPX4U](#)

Neural Networks and Deep Learning

Jun 2020

Coursera (authorized by [deeplearning.ai](#))

Verified: [UTAZWCPSF5XR](#)

Improving Deep Neural Networks: Hyperparameter Tuning, Regularization, and Optimization Jul 2020

Coursera (authorized by [deeplearning.ai](#))

Verified: [9J622AEZAELG](#)

PROJECT EXPERIENCE

PDF-Based RAG Chatbot (Python, LangChain, LLama, ChromaDB)

Jan 2025 - Present

- Developing an **AI-powered chatbot** that retrieves and generates responses based on PDFs stored in a data folder.
- Implementing **retrieval-augmented generation (RAG)** techniques to improve response accuracy and contextual relevance.
- Utilizing **LangChain** and **LLama** for intelligent text processing and **ChromaDB** for efficient vector-based retrieval.
- Optimizing **data indexing and query processing** to enhance chatbot performance and reduce response latency.

Hand Gesture Recognition OpenCV

Sep 2023 - Jan 2024

- **Image and Video processing:** Implemented real-time video processing capabilities using **OpenCV** and **MediaPipe**, reducing latency by 15% and improving overall user experience.
- **AI modeling:** Developed and implemented a simple neural network model for the project, achieving an initial accuracy rate of 90%, which was further improved with the introduction of **LSTM** to a final accuracy of 98%.
- **Memory management:** Enhanced file system capabilities within Python to optimize storage and retrieval of large datasets as well as creation of new data points is possible.
- **Code optimization:** Implemented node modifications and using varying activation functions to fine-tune AI models for faster hand gesture recognition (increase processing frames from 25 fps to 50 fps).

Blood and Bones Image detection

Feb 2023 - Apr 2023

- **Leadership:** Led the team in creating and testing various machine learning models (KNN, Decision Tree, Regression), with deep learning neural networks outperforming transfer learning algorithms by 15% in identifying malignant images.
- **Implemented 10 different AI models** (Deep Neural network) employing a variety of algorithms to accurately identify and classify problematic cells within medical images, resulting in varying accuracy rate from 60-92%.
- Utilized advanced coding techniques to integrate **Rest API** into a service that successfully detected objects in images upon upload, resulting in a 90% accuracy rate

Drowsiness Detection and Rest Stop Suggester

Jul 2020 - Nov 2020

- Implemented a comprehensive drowsiness detection system utilizing a Raspberry Pi camera and speaker, integrating a Python script with **machine learning algorithms** and **OpenCV** to achieve 95% accuracy in detecting driver fatigue.
- Developed a cutting-edge system integrating **Google API** and **IoT technologies** to detect driver drowsiness, projecting a 20% reduction in accidents on the road.
- Collaborated with cross-functional teams to create a navigator feature that automatically routes drivers to the nearest rest stop for safety