Nikhil Subramanian

London | +447788829397 | nikhil.subramanian06@gmail.com |
www.linkedin.com/in/nikhil-subramanian-nikrome

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, C++, C#, C, MATLAB, TensorFlow, NumPy, Pytorch, Sci-kit learn, Keras, OpenCV, RestAPI, OpenAI, Azure AI, AWS, Unity, Unreal Engine, Git, PowerBi, Microsoft Office (Excel, Word, PowerPoint)

Theoretical Skills:
Artificial Intelligence, Machine Learning, Deep Learning, Generative AI Model Training, Computer Vision, Object Oriented Programming, Data Structures & Algorithms, Cloud Computing, Debugging, Algorithm Design, Mathematics, 3D Mathematics

Soft Skill:
Leadership Skills, Analytical Thinking, Agile, Scrum, Problem-Solving Skills, Ability to Communicate Technical Ideas to a Non-Technical Audience, Teamwork, Critical Thinking, Project Documentation, Organisational Skills, can Work Under Pressure, Attention to Detail, Continuous Professional Development

WORK EXPERIENCE

AI Model Trainer @ *Alignerr (Remote)* **Nov 2024 - Present**

- Enhanced programming language generation models, improving output quality by 20% through iterative training and dataset refinement.
- Developed and managed datasets involving images, text, and conversations, ensuring 95% data integrity while adhering to project timelines.
- Provided insights on AI management tasks, reducing error rates by 10% and boosting model reliability.
- Resolved 80% of flagged performance issues, optimizing AI systems for scalability and safety.

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.

AI Data Trainer @ *DataAnnotation Tech (Remote)* **May 2024 - Nov 2024**

- **Data Analysis and Visualization:** Analyzed data from AI models, identifying key patterns and trends resulting in a 10% improvement in accuracy rate to 80% in determining model performance.
- **Code debugging:** Identified and addressed coding errors in AI model outputs, leading to a significant 20% improvement in programming logic and algorithm efficiency.
- **Chatbot response review & fine tuning:** Analyzed performance data from AI chatbots to identify areas of improvement, resulting in a 15% increase in customer satisfaction ratings. Achieved a 80% precision rate on data annotation tasks, guaranteeing the accuracy and consistency of responses, resulting in an improvement in AI chatbot performance by 20%.

Freelance Playtester **Jan 2024 - Present**

- Conducted **gameplay, UI/UX, and regression testing**, reporting critical bugs and balancing issues.
- Participated in **NDA-protected focus group discussions**, contributing structured feedback on mechanics and design.
- Used **JIRA and Trello** to log and track issues during remote playtesting sessions.

- Provided **detailed UX feedback** for a major game title, assisting in refining player experience.
- Worked with **development teams** to validate fixes and test new features pre-release.

Engineer Intern *@Capeleaf Technologies, Kanyakumari* **Nov 2020 - Dec 2020**

- Developed and executed **rigorous testing** protocols for embedded C++ code in the Monkey Datalogger, achieving a 99% success rate in capturing accurate feeding data.
- Engineered a sophisticated **data analysis system** for the Monkey Datalogger, enabling precise monitoring of feeding habits and delivering actionable insights to stakeholders.
- Collaborated with cross-functional teams to prototype a Car Speed Measuring device, introducing an innovative air pressure-based measurement method to improve accuracy and efficiency.

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

Introduction to Game Development **Jul 2020**
Coursera (authorized by Michigan State University)
Verified: ALW2HURG6PJL

PROJECT EXPERIENCE

IEEE ICDCECE 2022 Online International Conference **Jan 2022 - Apr 2022**

- Conference title: IoT based Voice Controlled Home Assistance Hexapod
- Awarded "Best Paper of the Conference" for innovation and technical excellence by a panel of industry experts, showcasing the groundbreaking capabilities of the IoT-based hexapod for home assistance.
- Integrated Lidar sensor technology into the hexapod system to create detailed maps of the home environment and accurately track its location at all times, leading to a 85% reduction in navigation errors.
- Developed a voice-activated system for the hexapod using arduino embedded C, increasing user engagement by 25% and making it more convenient for users to access assistance.

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 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.

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

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 function to fine-tune AI models for faster hand gesture recognition (increase processing frames from 25 fps to 50 fps).

PDF-Based RAG Chatbot (Python, OpenAI, LangChain, LLama, Render) **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, OpenAI, and LLama** for intelligent text processing and **Render** for efficient vector-based retrieval.
- Optimizing **data indexing and query processing** to enhance chatbot performance and reduce response latency.

Gesture Controlled Game **Sep 2023 - Jan 2024**

- Developed innovative hand gesture recognition algorithm using **Python's OpenCV**, resulting in a 95% accuracy rate in player interaction during gameplay.
- Utilized advanced algorithms like port communication in c# to optimize player gestures recognition within the game, leading to a 20% increase in user engagement and overall satisfaction.
- Integrated **Mediapipe**'s gesture recognition technology into **Unity** platform by developing custom **C# scripts**, resulting in a 30% increase in user engagement metrics.

PlayDetective - An AI crime interrogation game **Sep 2023 - Oct 2023**

- **AI Integration:** Led the development and implementation of PlayDetective game, utilizing **ConvAI** technology within Unity to enhance user experience and drive a 15% increase in daily active users.
- Integrated ConvAI's AI technology into project workflow, enhancing user engagement and satisfaction, with 8% increase in engagement time.
- Crafted engaging game design, incorporating innovative **UI/UX elements** and compelling story plot.

Beyond Darkness - A horror game using PCG **Oct 2023 - Dec 2023**

- Utilized **Unreal Engine** to develop Beyond Darkness, implementing procedural generation techniques to create dynamic environments and advanced AI systems, resulting in a 20% increase in player immersion.
- Implemented immersive **audio design** strategies, including ambient sounds and interactive elements, resulting in a 50% increase in positive player feedback on the overall gameplay experience.
- Implemented **procedural content generation (PCG)** algorithms in game development process, resulting in dynamic and unique gameplay experiences for players, leading to a 30% increase in daily active users.

VR Travel - Travel experience using VR **Sep 2023 - Jan 2024**

- Developed a cutting-edge VR app showcasing London Chinatown, collaborating with a cross-functional team of UI/UX experts, animators, and designers to bring the food culture experience to life. Utilized **Unreal Engine**, **Cesium**, and **C++** to create an immersive virtual environment.
- Implemented efficient project management practices by utilizing **Git version control** system to streamline collaboration among team members. This led to a 20% increase in productivity and ensured seamless integration of various design elements into the final product.
- Utilized memory management techniques like garbage collection and segmented to optimize app performance and user experience, resulting in a 15% faster loading times and better memory management.

Game Jam - Fintastic Flee **Sep 2023 - Nov 2023**

- Collaborated with game designers and programmers to create visually stunning underwater environments, enhancing player engagement for a Game JAM.
- Demonstrated adaptability by quickly adjusting to changing project requirements during the game jam, ultimately contributing to the success of "Fintastic Flee".
- Utilized **Unity** and **C#** to develop a new game feature, resulting in a 20% increase in gamer engagement metrics

Catching Game - Casual Mobile game **Jan 2025 - Present**

- Developed & programmed a 2D pixel-art arcade game in Unity (C#) with WebGL & mobile support
- Designed & created custom 8-bit pixel art for characters, UI, and environments
- Composed & implemented original 8-bit background music & sound effects
- Optimized game performance with object pooling, scene management & dynamic difficulty scaling
- Built & integrated a high score system with leaderboard & save functionality
- Debugged & solved complex WebGL IL2CPP build issues, ensuring smooth deployment
- Iterated & improved gameplay via LiveOps, feedback-driven updates, and CI/CD
- Play Grabbix: https://nikromegames.itch.io/grabbix