

Tianxiang Song (Michael)

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Profile

A MSc graduate with strong background in Computing and AI. Passionate about software engineering and data analysis, with solid experience in machine learning, mobile development and web programming.

Skills

Areas of Expertise: Computer Vision, Natural Language Processing, Mobile Application (iOS), Web Application, Robotic Process Automation, Deep Learning

Programming Languages: Python, Java, Swift, C, C++, HTML, CSS, JavaScript, Haskell, MATLAB

Tools and Services: Linux, SQL, Xcode, VS Code, Unity, Flask, Django, React (Native), Node.js, Docker, Git, AWS, WebSocket, FastAPI, UiPath, Adobe Suite, MS Office.

Education

Sep 2023 - Sep 2024

Imperial College London *Distinction*
MSc Computing (Visual Computing and Robotics)

Sep 2019 - Jul 2023

The University of Nottingham *First Class*
BSc Computer Science with Artificial Intelligence

Experiences

Apr 2025 - Present

Air Aware Labs *AI Scientist*

- Developed route optimization algorithm to reduce exposure to air pollutants.
- Integrated LLMs to provide feedback on user's past activities and optimization suggestions.
- Trained Graph Neural Networks to provide personalized route recommendations based on past activities.
- **Skills:** Data Analysis, Machine Learning, Retrieval-Augmented Generation, Graph Neural Networks

Jan 2025 - Mar 2025

Visualist *Machine Learning Intern*

- Fine-tuned image inpainting models for object removal, aligning with target user's needs.
- Dockerized and deployed image generation models for mask/prompt based editing.
- **Skills:** Deep Learning, Computer Vision, Image Processing, Generative AI, Docker, FastAPI

Dec 2024 - Jan 2025

Blitzo *Software Engineer Intern*

- Enhanced and maintained mobile and web applications for a delivery booking platform.

- Implemented functions that allow users to book multiple active orders, improving operation efficiency.
- **Skills:** TypeScript, React, React Native

Dec 2024 - Present

Outlier *AI Trainer (part time)*

- Optimized LLMs for coding expertise regarding instruction following, truthfulness and verbosity.
- Conducted Python code reviews for correctness and efficiency.
- **Skills:** Prompt Engineering, Large Language Models, Python, Code Review

Projects

Jan 2024 - Sep 2024

OCR Applied to Modern Literature *Dissertation*

- Developed OCR models to extract text from historical Chinese documents in modern literature.
- Proposed synthetic data generation process to address the lack of training data.
- **Skills:** Computer Vision, OCR, Synthetic Data Generation, Deep Learning, Python

Jun 2022 - May 2023

Guided Assembly with Augmented Reality *Dissertation*

- Developed an AR tutoring system as an iOS application to assist manual assembly tasks.
- Trained and integrated deep learning models for instruction automation based on step completion.
- **Skills:** Computer Vision, Augmented Reality, 3D modelling, SLAM, UX, UI, Xcode, Swift

Jun 2022 - Aug 2022

Document Text Recognition *Researcher*

- Implemented and applied state-of-the-art image denoise methods to camera-taken documents.
- Proposed a table recognition algorithm for organizing recognized text in tabular format.
- **Skills:** Computer Vision, Image Processing, Deep Learning, OCR, Python

Oct 2021 - May 2022

Codenames - Game AI *Technical Lead*

- Emulated the *Codenames* board game as a web application and deployed it in web servers.
- Implemented AI players using NLP techniques and client-server communication.
- **Skills:** HTML, JavaScript, Flask, AWS, Git, Natural Language Processing, Team Management

Jun 2021 - Oct 2021

Trademark Retrieval Tools *Researcher*

- Built a software collaborated with Ningbo Customs for validating trademarks on a given picture.
- Fine-tuned deep neural networks as feature extractor and proposed a trademark retrieval algorithm.
- **Skills:** Computer Vision, Deep Learning, Python