

ALBERT ATKINSON

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Mathematics graduate (First-Class Honours, UCL) and versatile developer of ML-powered applications. Track record of building scalable systems that solve real business problems. Tech stack agnostic, always seeking the pragmatic solution.

WORK EXPERIENCE

AFFECTUSAI

Co-founder, CTO

April 2024 – Present

- Secured funding through investor pitches
- Leading development of InsightAC, a B2C Companion App for Web and iOS, utilizing Speech-to-Speech AI models for personalized user interactions. Tech Stack: MERN, Next.js, Swift
- Designed patent-pending backend architecture and user retention reinforcement learning algorithm (approved by patent lawyers)
- Iteratively pivoted WebRTC architecture multiple times to optimise real-time audio streaming performance and enhance user experience, effectively managing technical trade-offs between reliability, latency, and scalability.

TUTORFUL/ERGO EDUCATION

Mathematics Tutor

April 2021 – December 2023

- A-level and GCSE mathematics tutor, in-person and online

QA LTD

Java Software Developer

September 2020 – May 2021

- Developed and maintained microservice APIs using Java and C++
- Managed cloud infrastructure with Azure/AWS, employed robust CI/CD pipelines and orchestrated with Docker and Kubernetes.
- Implemented unit testing, integration testing, and end-to-end testing with Cypress
- Acquired practical knowledge of DevOps methodologies

EDUCATION

UNIVERSITY COLLEGE LONDON

London

BSc Mathematics: First Class Honours

2021 - 2024

- Key Modules: Computational Methods, Machine Learning for Domain Specialists, Financial Mathematics
- Extracurricular: Guitarist/Singer/Pianist in over ten shows

BRIGHTON HOVE & SUSSEX SIXTH FORM COLLEGE (BHASVIC)

Brighton and Hove

A-Levels: A*, A*, A (Maths, Further Maths, Physics)

2017 - 2019

- National Mathematical Olympiad
- UK Mathematics Challenge Gold Award - 2019 and 2018

DOROTHY STRINGER SCHOOL

GCSEs: 3A*, 4A, 4B

2012 - 2017

SKILLS

- Languages: Python, C++, JavaScript (TS, Node, Express, React), Java, Swift
- Technologies: PyTorch, Pandas, SciKitLearn, Numpy, Linux, MySQL, Git, Jira, OOP, Docker, Kubernetes, HuggingFace
- Soft Skills: Leader, cross-functional communicator, trusted teammate, fast learner, clear presenter, adaptable to new technologies

LEADERSHIP EXPERIENCE

- Led AffectusAI engineering team across 4 time zones, implementing asynchronous workflows that reduced sprint planning time
- Directed 'Rhapsody', a large-scale music production, managing £5K budget and 100+ person team to deliver sold-out performances

PROJECTS

- **State Machine:** Dynamic state machine across 4 distinct modes to support seamless real-time conversations.
- **Cerebro:** 3D visualization system that transforms AI conversation data using advanced dimensionality reduction techniques.
- **LLM from Scratch:** Built a character-level bigram model and a GPT-style transformer from first principles using PyTorch
- **NeRF:** Implemented a Neural Radiance Field (NeRF) deep learning model for optimizing the radiance and 3D structure of a scene from 2D photographs. Developed a comprehensive pipeline from image input to 3D mesh extraction including an AR viewer
- **Frontend:** Discord Clone, SaaS AI companion platform, Portfolio Website, Insight iOS App, 3D Brain Visualization