

Cyrus Knopf

Portfolio: cyrusknopf.com

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EDUCATION

- University of Manchester** Manchester, UK
BSc Computer Science September 2022 - Present (2025 Graduation)
Currently achieving a First Class Honours
Courses: Algorithms & Data Structures, System Architecture, Compilers & Assembly, Database Systems, Machine Learning
- Worthing College** Worthing, UK
A-Levels: Further Maths, Maths, Physics Sep 2019 - Jun 2021

EXPERIENCE

- Optimistics** Remote
Product Engineer - Freelance One year (current position)
 - Brought AI solutions to an SEO company serving clients such as a UK top 10 travel insurance broker
 - Extensively leveraged large language models, including fine-tuning using bespoke datasets
 - Consultant on development and technical decisions on various products
- NHS** Worthing, UK
Food Service Assistant One year
 - Worked independently on hospital wards with strict health and safety regulations in a patient-facing role
 - High responsibility role, including working with vulnerable patients and regular sanitation responsibilities

PROJECTS - ACADEMIC & PERSONAL

Bitboard Chess Engine | C++, Google Test, CMake, OpenMP 🔗

- Built chess engine from scratch using efficient bitboard game representation and bitwise operations
- Designed and implemented the Monte Carlo tree search algorithm for a fully autonomous agent
- Test suite of over 100 unit tests using the Google Test library whilst following test driven development
- Undergoing various optimisations including parallelisation with OpenMP

Obsidian Plugin: Smart Tasklists | Typescript, JavaScript, Obsidian API 🔗

- Implemented a recursive algorithm in TypeScript to improve vanilla Markdown tasks
- Leveraged the Obsidian API to create a responsive plugin

Naive Bayes Spam Filter | Python, Jupyter 🔗

- Implemented a Naive Bayes Classifier from the ground up to classify messages as spam with 93% accuracy
- Utilised libraries such as Matplot, Pandas and Functools
- Achieved 90% in university assignment with this foundational machine learning model

PROJECTS - COMMERCIAL

AI Title Tag Generator for Real Estate | Google AppScript, Bootstrap, jQuery 🔗

- Developed solution for use with 4 real estate companies to leverage AI for efficient title tag generation
- Seamless user experience, fully integrated the service into Google Sheets via Google AppScript
- Effective communication with manager to ensure requirements are delivered upon, involving active listening and effective written communication

SKILLS SUMMARY

- Languages:** Python, Java, ARM Assembly, Haskell, OCaml, Typescript, C/C++
- Frameworks:** Django, Flask, NodeJS
- Tools:** Git, PostgreSQL, MySQL, Docker, Vim

HONORS AND AWARDS

- Top 3: Bloomberg BPuzzled 2023 Manchester
- Silver: UKMT Senior Challenge
- 1st: Peak AI Data Science Hackathon
- 1st: Great Uni Hack 2023 - Web Design Challenge
Finished 1st out of 54 teams at a hackathon attended by multiple UK and international universities