

Hayden Tibbals

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Personal Profile

Recent MPhys graduate with first-class honours from The University of Manchester, specialising in quantitative analysis and data-driven problem-solving. My academic and professional experiences include building machine learning models, optimizing treatment plans with NHS Christie Hospital, and creating predictive tools for sports and financial data. Proficient in Python, SQL, and advanced data analytics, I excel in leveraging data to generate actionable insights. I bring strong teamwork, communication, and leadership skills honed through collaborative projects and competitive sports.

After a break from studies to travel and remote work I am looking for a role as in development to start my career.

Skills

Programming **Languages:** Python (Advanced), SQL, Latex (Intermediate), C++, React, TypeScript (basic)
Libraries: Pandas, Sklearn, Pydicom, OpenAI, Matplotlib, Numpy.

Data Science Data cleansing, Data analysis, Data Visualisation, Machine Learning

Education

The University of Manchester

MPhys (Hons) Masters of Physics with Study Abroad

Manchester, UK
Sep 2020 - Jul 2024

- Achieved a first-class honors (Overall grade in top 5% in year 3)
- Specialized in machine learning, data analysis, and programming.
- Thesis: Reinforcement learning-based AI for cancer treatment optimization (graded 79%, top 10%).
- Peer mentor for first-year undergraduates and volunteer for Physics Outreach programs.

Stony Brook University, New York

MPhys (Exchange year)

Stony Brook, New York
Aug 2022 - May 2023

- GPA: 3.8, focused on data analysis and communication through laboratory work.

Technical Experience

Broadhaven Ventures

Applied AI Research Intern

Miami, Florida
Jul 2023 - Sept 2023

- Collaborated closely with the principal to automate data gathering for strategic briefings, saving over 30 minutes per task.
- Developed AI-driven tools using Python and Generative AI frameworks.

Outlier AI

Senior Reviewer for Gen AI Training Data Development

Remote
Jul 2024 - Present

- Create mathematical training data for cutting-edge generative AI models.
- Promoted to Senior Reviewer after exceptional work.
- Improve/review other's work and provide feedback to ensure the highest quality training data is provided for customers.

Cancer Treatment Plan Optimisation (Machine Learning)

NHS Christie Hospital (University Project)

Manchester, UK
Oct 2023 - Jun 2024

- Analysed large-scale patient datasets develop an AI model for optimising cancer treatment plans using reinforcement learning.
- Preprocessed and refined large-scale patient datasets, to simulate treatment and optimise dose planning.
- Trained and fine-tuned reinforcement learning models to create mock plans by deciding optimal dose placement.

Data and Machine Learning Projects

Independent Projects (All available on my website)

Crowborough, UK
Sep 2020 - Present

- **Reinforcement Learning AI Trading bot:** Developed an rl agent capable of trading stocks using financial engineering inputs.
- **Portfolio Website:** Personal React website to display personal projects.
- **Premier League Match Predictor:** Created a machine learning model and web interface to display premier league match predictions and results, with a 70% accuracy
- **AI Negotiation Web App:** Programmed an operational full stack negotiation assistant web app with returning users using React.
- **Consultancy Software Project:** Consulted with a small business to develop a bespoke AI-assisted CRM tool.

Interests

- Rugby** Representing The Stony Brook University D1 Rugby team, including an international 7s tournament in Bermuda.
- Running** Avid runner, having completed the Manchester marathon, raising £1200 for charity.
- Kaggle** Entering Kaggle competitions and working with public datasets.

Additional Experience

Morrisons Supermarkets

Customer Service Assistant

Crowborough / Manchester, UK

Apr 2019 - Aug 2022

- Managed customer interactions while balancing part-time work with academic responsibilities.
- Developed teamwork, communication, and organisational skills.