Elliot Tuckerman

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Portfolio https://etuckerman.github.io

Green Card holder; relocated from the UK to the USA.
Expertise in LLM optimization, NLP, and fine-tuning.

SKILLS

- **Languages:** Python, C++, C#, SQL
- **Technologies:** NLP (spaCy, BERT, NLTK), Multi-GPU Training, Model Optimization
- **Tools:** TensorFlow, PyTorch, Hugging Face, Scikit-learn, XGBoost, AWS, Git, Jupyter
- **Practices:** Test-Driven Development (TDD), Object-Oriented Design (OOD), Version Control, Agile

EDUCATION

- **Sheffield Hallam University** — Sheffield, UK
  BSc in Computer Science; GPA: 4.0 — *2020 – 2024*
  - **Specialization**: Machine Learning and Heuristics
  - **Relevant Coursework**: CS50's AI with Python (Harvard, edX), NLP with Transformers (Hugging Face)

EXPERIENCE

- **SPRK** — Tampa, FL
  Machine Learning Engineer, Syllabus AI — *2024 - Present*
  - **Data Extraction**: Integrated LlamaParse to streamline the extraction of actionable data from college syllabi, greatly improving speed and accuracy. This cut manual processing time and ensured high-quality data.
  - **Data Structuring**: Employed Qwen2.5-72B-Instruct to interpret extracted data, organizing it into structured JSON format that includes event details like descriptions and due dates. This data structure facilitates applications like academic calendars and notifications.

- **DataAnnotation.tech** — Atlanta, GA
  Machine Learning Engineer, LLM Optimization — *2023 - 2024*
  - **Code Evaluation**: Validated outputs from large language models.
  - **Optimization**: Enhanced code for improved performance.
  - **Model Management**: Supervised in-development model performance.

- **Sheffield Hallam University** — Sheffield, UK
  Game Developer (C++) — *2020 – 2024*
  - **AI Development**: Created AI for Tic-Tac-Toe and Minesweeper using advanced algorithms.
  - **Project Management**: Led team, managing tasks and timelines.
  - **Game Quality**: Produced high-performance, user-focused games.
  - **Awards**: Won "2D Game of the Year" for innovative design.

PROJECTS

- **Llama 3.1 QA Fine-tune**: Fine-tuned LLaMA 3.1 with TensorFlow, utilizing a custom dataset to improve language model performance for an RV company. Focused on optimization and evaluation.
- **Multilingual Speech Application**: Commissioned by a customer service team to build a real-time multilingual speech application using MMS-TTS database. Implemented a queue system for translating and outputting multiple sentences simultaneously, producing live, natural-sounding voice translations.
- **Multi-GPU LLM Fine Tuning**: Leveraged multi-GPU techniques in PyTorch to scale and optimize large language model training for improved efficiency.
- **AI-Powered CS:S Surfing Community Assistant**: Developed a Python-based AI assistant using NLP to enhance player interaction in Counter-Strike: Source's surfing community.
- **Vehicle Theft Analysis**: Implemented data analysis with Python and Scikit-learn to extract insights from stolen vehicle datasets and develop predictive models.
- **PS5 3D Game Engine Development**: Engineered a high-performance PS5 game engine using the Sony PS5 SDK, optimizing graphics and performance.
- **Unity Advanced Movement System**: Developed an advanced movement system in Unity, enhancing physics realism and gameplay mechanics.
- **Personal Portfolio Website**: Designed and developed a responsive portfolio website using HTML, CSS, and JavaScript. Hosted on GitHub Pages with a focus on showcasing AI/ML projects, blog posts, and technical skills.