

Youssef Karim El Aasar

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Personal Summary

- Ambitious Computer Science master's student specializing in Artificial Intelligence and Machine Learning.
- Naturally curious and innovative programmer, passionate about exploring and implementing emerging technologies.

Education

University of Surrey

Sept 2021 - July 2025

Master of Engineering (MEng) in Computer Science

Guildford, Surrey

- **Expected Grade:** 1st Class Honours
- **Relevant Fields:** AI and ML (Python and Matlab), Data Analytics (Python), Data Structures and Algorithms (Python and Java), Prob & Stat in CS, Databases (Python and SQL)
- **Relevant Coursework:** Fine-tuned Facebook's OPT-2.7b Language model using PEFT (LoRa), Developed 4 Language models for Sequence Classification where the best was implemented into a Webapp

Relevant Experience

Etisalat

Jun 2023 – Aug 2023

System Development Intern

Cairo, Egypt

- 3-month internship, rotating through different teams, each focused on distinct aspects of system development. Each following bullet point denotes what each month was focused on.
- Worked with the ASP.NET MVP Framework, oversaw and understood the development of their web applications.
- Automated business processes using UIPath, significantly improving efficiency and reducing manual workload.
- Assisted in maintaining and optimizing the SharePoint infrastructure, which allowed for collaboration and information sharing across departments.

Personal Projects

Symbolic Music Generator | PyTorch, Transformers, Pandas, Matplotlib, HuggingFace, Wandb

- Engineered a Transformer-based system to generate retro video game music (e.g., Mario) using MIDI data.
- Trained the model for over 24 hours on an A100 GPU, using Wandb to track analytics during training.
- Handled end-to-end Model development, from model selection and preprocessing to full training and fine-tuning.

Aim Trainer | Python

- Created a 2D Aim Trainer game to improve mouse accuracy for First Person Shooter gamers.
- Integrated support for various controllers, including PlayStation 4, enhancing usability.
- Added real-time performance tracking to monitor user progress into a database so users can compare scores.

Portfolio Website | Django, React, PyTorch

- Built a personal portfolio website using Django to showcase projects and market myself.
- Integrated PyTorch to power an interactive AI feature demonstrating my previously referenced Music Generator.
- Implemented secure authentication and responsive design for improved user experience.

Skills, Achievements and Interests

Skills

- Languages: Python, SQL, Java, JavaScript, MatLab, C++, HTML, C#
- Technologies: PyTorch, TensorFlow, NumPy, Sklearn, Pandas, Django, Flask, ASP.NET, Pygame, Laragon
- Soft Skills: Good Communicator, Problem-solving, Teamwork, Critical Thinking, Leadership, Adaptability

Achievements

- Courses : Machine Learning, Data Science, Statistics and Probability
- Competitions: Hackathons ran by Encode™
- A Levels: Maths, Physics and Computer Science
- Sports: Brazilian Jui-Jitsu Competitor, Cycling