

Stephen Haskins

Computer Engineer

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Education

Trinity College Dublin

Expected Graduation May 2026

Year 5 in Computer Engineering Integrated Masters Programme

Dublin, Ireland

- **Relevant Coursework:** Engineering Mathematics I-V, Deep Learning (Python), Computer Vision (OpenCV - C++)
- **Results:** Year 4 - 1:1

KU Leuven

2nd Semester Erasmus 2025

One semester in the Artificial Intelligence Masters Programme

Leuven, Belgium

- **Relevant Coursework:** Computer Vision (Python), Machine Learning (Python), Information Retrieval (Python)

Projects

For my latest projects, please see stephenhaskins.me

Machine Learning Project | Python, AWS | [Web page](#)

- Developed and trained a reinforcement learning agent for an Atari-style zombie shooting game.
- Performed manual feature engineering, transforming raw environment states to more meaningful features.
- Competed in a course-wide competition, placing in the top 30%

Information Retrieval Pipeline | Python, Docker, RAG | [Web page](#)

- Developed an end-to-end RAG chatbot for recipe datasets, exploring word-level TF-IDF (Term Frequency-Inverse Document Frequency) information retrieval.
- Implemented parallel dataset & query preprocessing such as text normalisation & lemmatisation
- Used a pre-trained embedding model to transform data into dense vector representations.
- Evaluated the TF-IDF retrieval technique using appropriate metrics to analyse it's strengths & weaknesses
- Integrated Claude Haiku's API to generate accurate, contextual responses.

Computer Vision Project | Python, Deep Learning | [Web page](#)

- Developed and trained an end-to-end neural network for classifying 20 object classes in colour images.
- Implemented data augmentation to prevent overfitting & class-weighted loss functions to handle class imbalance.

Experience

KX

May 2024 - August 2024

Software Developer Intern

Dublin, Ireland

- Worked as part of the [KDB.AI](#) team, integrating an AI search engine into the existing KDB+ product.
- Conducted benchmarks for the latest KDB.AI releases, providing performance results for marketing & sales teams
- Developed a GitLab CI/CD benchmarking pipeline & forwarded results to a slack API, ensuring possible performance degradation is caught at an early stage.
- Utilised SonarQube for static code analysis, focusing on reducing code complexity, eliminating code smells, bugs, and improving overall code maintainability.

OSS Recruitment

April 2022 - September 2024

Event Crew

Dublin, Ireland

- Worked as local crew in high pressure environments, assisting industry experts at Ireland's largest festivals/venues.
- Spotlight operator at Electric Picnic '23 main stage for headlining acts in front of a crowd of 70 thousand.
- Pitchside staff at Aviva Stadium, setting up Guinness 6 Nation Rugby Grand Slam winning podium & pyrotechnics.

Technical Skills

Languages: Primarily Python, also C/C++, SQL & Assembly

Technologies: AWS, Azure, Docker, Gitlab CI/CD, TensorFlow, SonarQube, OpenCV, Pandas, Numpy

Concepts: Prompt Engineering, Transformers & Attention Models, OOP, Data Pipelines, Natural Language Processing

Soft Skills: Time Management, Resilience Under Pressure, Team Collaboration & Communication, Analytical Thinking

Interests

I have a strong passion for photography, using an old mechanical film camera. See some of my photos on my website [here](https://stephenhaskins.me).