

LUCAS ENG

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EDUCATION

New York University, Tandon School of Engineering, New York, NY May 2025
Bachelor of Science, Computer Science with Math Minor

EXPERIENCE

AI/Machine Learning Development Intern, *HashedTokens* August 2024- Current

- Implemented feature importance algorithms to enhance model interpretability
- Designed and built debugging tools to identify and resolve issues in complex neural architectures

Head Computer Science Teaching Assistant, *NYU* September 2024- Current

- Oversee Python instruction for a class of 140 students, including helping to develop the curriculum, as well as coordinate Office Hours and Labs
- Conducted administrative work relating to conducting interviews and the hiring of personnel for the NYU Tandon Computer Science department

Computer Science/Python Teaching Assistant, *NYU* August 2023- May 2024

- Facilitate undergraduate lab sessions, providing instructional support and clarifying programming concepts, and conduct office hours to resolve diverse programming queries

PROJECTS

Neural Machine Translation Model: English to Spanish

- **Model Creation:** Developed a seq2seq BiLSTM model with attention for English-Spanish translation, achieving 75% accuracy by training on 2 million lines of scraped UN proceedings
- **Preprocessing:** Implemented data preprocessing, model architecture design, and performance optimization for consumer-grade hardware

ShadowDash Compiled Build System

- **Innovative Build System:** Developed an innovative build system with pseudo C/C++ syntax, enabling direct compilation rather than parsing
- Engineered a ninja-like build tool that leverages familiar C/C++ constructs for improved performance and developer experience

Administrative Full Stack Web Application (NYU Project)

- **System Architecture & Development:** Led the design and implementation of a complex administrative web application for a simulated corrections facility, crafting a robust SQL database schema integrated seamlessly with a Flask backend to ensure data integrity and performance.
- **Full Stack Engineering:** Developed a secure backend using Python and Flask, paired with an intuitive frontend using HTML/CSS/JavaScript, enhancing user interaction in diverse conditions.

CERTIFICATIONS

CLF-C02: AWS Certified Cloud Practitioner April. 2024 - Present

- Certification in Amazon Web Services cloud technology: EC2, ECS, EKS, S3, EBS, RDS

OPEN SOURCE

Javascript/MathJS April 2024- Present

- Writing and executing comprehensive test cases to ensure code reliability and performance

COURSEWORK

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| <ul style="list-style-type: none">• <i>Relational Databases/NoSQL</i>• <i>Agile/Scrum</i> | <ul style="list-style-type: none">• <i>Data Analysis / Machine Learning</i>• <i>Operating Systems</i> |
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SKILLS

- *Languages/Frameworks (Proficient):* Python, C, C++, CSS, HTML, Java, SQL, PyTorch, OpenGL
- *Machine Learning:* SciKit-learn, Pandas/Numpy Libraries, TensorFlow, Pytorch, Keras
- *Misc:* Computer Architecture, Computer Networking, Git/GitHub, API, CUDA