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- December
- Developed a C++/OpenCL based Python Library for accelerated matrix computation with the goal of training machine learning models
- Achieved a 50% speedup over CPU-based operations for training deep learning models

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

Test-Day Software Developer, *NYU*   December 2024 - Current
- Architected and deployed a full-stack web application licensed to NYU Computer Science department, streamlining exam administration for thousands of students through automated test location assignments and barcode-based tracking
- Engineered a scalable system integrating student data management, dynamic room allocation algorithms, and unique barcode generation

PROJECTS

LucasLikesC, *Technical Education Creator*   January 2025- Current
- **Developed comprehensive tutorials and projects** in advanced systems programming, covering implementation of TCP/IP protocols, load balancers, and custom network stacks in C, reaching over 500 learners
- Created in-depth technical content on embedded systems and sensor fusion, focusing on real-time operating systems, multithreading, and hardware interfacing through hands-on projects

SpeedJumper/BaseJumper,
- **Developed a basic English based turing-complete programming language** for a simple introduction to programming catered towards younger students and beginners
- **Built a C++ based compiler** which converts to x86-Assembly language.

OPEN SOURCE

ShadowDash Compiled Build System - NYU Open Source Software Development
- **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

Javascript/MathJS
- Wrote and executed comprehensive test cases to ensure code reliability and performance

COURSEWORK

- *Relational Databases/NoSQL*
- *Agile/Scrum*
- *Programming Languages*
- *Data Analysis / Machine Learning*
- *Operating Systems*
- *Compilers*

SKILLS

- *Languages: Python, C, C++, CSS, HTML, SQL*
- *Machine Learning: SciKit-learn, Pandas/Numpy Libraries, TensorFlow, Pytorch, Keras*
- *Compilers/Programming Languages: LLVM, ANTLR, Bison*