Cooper Proctor

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Education

Cornell University Ithaca, NY
Bachelor of Science in Computer Science, Minor in Interactive Technologies *Expected May 2026*

Relevant Coursework: Intro to Analysis of Algorithms, OOP and Data Structures, Intro to ML, Neural Networks/Deep Learning
Organizations: Cornell Concrete Canoe, Cornell Hyperloop, Rock Climbing Team, Taekwondo, Jiu Jitsu, Judo

Experience

Machine Learning Research Assistant June 2025 – Present
Cornell University - SciFi Lab *Ithaca, NY*

- Engineered a wearable system leveraging 8-channel acoustic sensing to detect muscle activity and deliver corrective stimulation for facial paralysis
- Optimized real-time detection and stimulation models for deployment on STM32-N6 AI hardware, achieving 3x faster inference and precise muscle localization

Software Engineer Intern May 2024 – Aug 2024
SGM Inc. *Glenwood Springs, CO*

- Developed SQL database to streamline construction cost estimates and schedules of values, reducing time to generate and deliver more accurate reports to clients by approximately 25%
- Designed and presented 3 interactive dashboards incorporating interactive ArcGIS maps and live alerts, enhancing user insights on geospatial water data trends across western Colorado

Deep Learning Research Assistant (Remote) Oct 2024 – Jan 2025
DTU Health Technology *Lyngby, Denmark*

- Processed accelerometer data using machine learning and signal processing techniques to identify gait and walking patterns from detected movement bouts
- Implemented a CNN with PyTorch to classify idiopathic REM sleep behavior disorder based on identified gait patterns, advancing early diagnosis

Undergraduate Research Assistant Jan 2024 – May 2024
Cornell University - Computer Graphics Department (Prof. Greenberg) *Ithaca, NY*

- Developed a physics-based, free-hand virtual grasping tool adaptable to more than 30 virtual objects, utilizing VR headset cameras to track key hand points and simulate precise interactions with 3D objects
- Integrated efficient AR/VR graphics technologies to recognize hand positions in space and apply real-time physics forces upon contact with objects, eliminating the need for physical gloves

Projects

Cornell Concrete Canoe (Mold/Analysis Lead) Sept 2023 – Present

- Directed mold and structural analysis for ASCE competitions, driving high-stakes decisions in a 50-member team
- Led cross-team coordination between all subteams to ensure precision and quality under tight deadlines

Chroma Chameleon (Technical Lead) Java, Box2D Jan 2025 – May 2025

- Directed technical development of a cross-platform stealth-combat game, managing core gameplay mechanics
- Implemented AI for all enemies and key gameplay features while guiding team contributions

Technical Skills

Languages: Java, Python, TypeScript/JavaScript, C/C++, SQL, OCaml, HTML/CSS
Frameworks & Libraries: PyTorch, TensorFlow/Keras, Scikit-learn, Pandas, NumPy, React
Tools & Platforms: Git, Unity, Unreal Engine, Vercel, AutoCAD API, ArcGIS API

Interests

Interests: skiing, rock climbing, mountain biking, running, ice baths, mapping, bioethics, creative writing
Events: 2024 Aspen Ideas Festival Volunteer, Big Red Hacks 2022/2023, Cornell 2022 Big Ideas Competition