

Gabriel Fuchs

📍 Ithaca, New York, US 📞 (201) 669-1070 ✉️ gdf42@cornell.edu 🔗 [LinkedIn](#)

EDUCATION

Cornell University, College of Computing and Information Science
Candidate for Master of Engineering • *Computer Science*

Expected Nov 2024 | Ithaca, NY

Cornell University, College of Engineering
Candidate for Bachelor of Science • *Mechanical Engineering* • GPA: 4.0

Expected May 2024 | Ithaca, NY

TECH PROJECTS

OCaml Data Base Management System

Developed a sophisticated functional styled (persistent) database management system in OCaml, incorporating both standard and advanced analysis features to optimize performance and reliability

ROS Path Finding Implementation for Virtual Vehicle

Composed a solution to the car pathfinding problem by leveraging corrective Bayesian filtering techniques for simulated lidar error in a virtual maze-styled environment, emphasizing optimization and efficiency (Robot Operating System)

CPU + ALU Schematic Design

Designed and developed a 32-bit ALU and CPU, enabling basic virtual computation and facilitating the exploration of the RISC-V assembly language, showcasing strong hardware design and computer architecture knowledge

Concussion Rehabilitation Cognitive Therapy Program

Engineered a user-centric and interactive therapy program specifically tailored to concussion patients, with a particular emphasis on auditory exercises, allowing them to effectively practice and enhance essential skills crucial for their recovery

PROFESSIONAL EXPERIENCE

Newark Energy Center

June 2022 – January 2023 | Newark, NJ

Engineering Intern

- Developed an Excel program to automate capacity testing report calculations, significantly reducing completion time
- Conducted comprehensive analysis of evaporation cooler efficiency, proposing effective solutions to combat wear
- Took charge of updating outdated and new system P&ID drawings, successfully eliminating the need for outsourcing

PHT Aerospace

Oct 2019 - March 2020 | Pompton Plains, NJ

Aerospace Engineering Intern

- Utilized SolidWorks to meticulously reverse engineer various airplane parts in compliance with government regulation
- Employed various soldering, fitting, and treating techniques on the manufacturing floor to assemble designed parts
- Ensured the high quality of produced parts through light-based & computer-controlled measurement devices

Phi Gamma Nu Professional Business Fraternity

October 2021 - Present | Ithaca, NY

Alpha Delta Class

- Developed and fine-tuned intensive entrepreneurship ventures with real-world feasibility for seamless implementation
- Conducted extensive research & prepared impactful presentations in the fields of management, education, & real estate
- Constructed detailed financial models to accurately evaluate the valuation of existing companies and potential startups

ENGINEERING EXPERIENCE

Cornell University Baja Racing Project Team

October 2020 – May 2022 | Ithaca, NY

Frame Sub-Team Member

- Constructed bleeder block to specification in SolidWorks for 3D printing and physical use in bleed process
- Reviewed technical reports to identify future system requirements and design goals for non-structural tabs

Cornell University Math Research Project

May 2021 – October 2021 | Ithaca, NY

Student Researcher (Partial Differential Equations for AI)

- Conducted extensive mathematical research to explore alternative approaches to modeling partial differential equations
- Explored error associated with using Fast-Fourier-Transform with small-size datasets for modeling heat/wave equation

SPECIALIZED SKILLS & INTERESTS

- **Software Tools (Proficient):** Python (NumPy Scikit-learn, PyTorch), MatLab, Java, C, OCaml, React, Excel
- **Interests:** Soccer, Swimming, Entrepreneurship, Backpacking, Sci-fi novels, Rubik's Cube Solving