Neha Sudarshan

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About Me

Hello! I am a computer science student at Cornell University minoring in mathematics. I am interested in ML and the mathematical side of computer science.

Education

Cornell University, College of Engineering, Ithaca, NY **Expected May 2027**
Bachelor of Science in Computer Science GPA: 3.78
Minor in Mathematics
Relevant Courses: Linear Algebra; Object Oriented Programming & Data Structures; Functional Programming; Probability & Statistics; Discrete Structures; Algebra; Analysis; Differential Equations; Computer Organization; Analysis of Algorithms

Project Involvement

Python-Based Pascal Interpreter **May 2025 - Aug 2025**

- Worked to build interpreter for Pascal-type language, complete with environment, variable scope, and type-checking
- Implemented Abstract Syntax Trees to construct parse tree, used tree rotations to increase efficiency by 20%
- Used visitor design pattern to split project into lexer, parser, and interpeter

Dining Hall Filter **Mar 2025 - May 2025**

- Collaborated to develop an interface allowing users to filter through campus dining options for 4 different cateogries (e.g. dietary restrictions)
- Used higher-order programming and Git to maximize workflow and implemented CI/CD pipeline
- Integrated GET API and used webscraping/JSON to pull weekly menus across 10 dining halls on campus, increasing usability and scalability by 300%

Automaker Dataset Insights Project, Cornell Data Strategy **Nov 2024 - Dec 2024**

- Worked in a 4-member team to analyze car manufacturer's dataset of 100,000 data points
- Used SQL joins on factors such as location and part ID to classify datapoints into cluster groups
- Performed linear regression, split data into training-testing sets to draw insights to increase profit margin

Artificial Life Simulator **Oct 2024 - Dec 2024**

- Worked in a group of 4 students to develop an simulator using Java, JavaFX (codebase of ∼10K LoC)
- Back-end implemented parsing of files and implementation of Djikstra's algorithm
- Built front-end interface allowing users to specify animation FPS, size using Model-View-Controller design pattern

Professional Experience

Cornell Bowers CIS, Ithaca NY, *Teaching Assistant - Discrete Structures* **Jan 2025 - May 2025**

- Held office hours twice a week for course size of ∼350 students
- Reviewed course content, such as induction proofs, Bayes' rule, and combinatorics
- Led weekly discussion sections to answer questions and go over example problems (∼40 students)

Extracurricular Involvement

Women in Computing at Cornell, *Incoming Career Development Director* **Aug 2025 - Present**

- Organized a visibility workshop aimed at introducing new students (50 attendance) to affinity groups
- Led a general-body meeting to discuss methods of using generative AI to support first-generation students

Cornell Data & Strategy, *Senior Associate* **Dec 2024 - May 2025**

- Assist project management on Project Nexus, a transportation-based team project
- Integrate weather-based REST API frameworks (NOAA) and transportation-based APIs (OSRM/NREL) to develop an A^* heuristic for accurate models
- Developed strong communication skills, required for communicating and understanding product specifications

CU GeoData, *Tech Subteam Member* **Oct 2024 - Present**

- Utilized AutoCAD to design a GPS mount for drone to survey Cayuga lake system
- Presented at Cornell EAS Department Symposium to group of ∼50 faculty and community members
- Building sensors to collect data on soil fertility using open-source documentation and Ubuntu environment

Specialized Skills

Programs: Java (Spring, JavaFX), Python (NumPy, pandas), OCaml, SQL, LaTeX, C, Typescript
Software: Microsoft Office, Solidworks, GitHub, AutoCAD, Jupyter Notebook, AMPL, Canva, Fusion 360
Languages: English (Native), French (Fluent), Hindi (Elementary), Tamil (Spoken)
Other: problem-solving, team building, conflict resolution, data analytics, data science, system design, version control, troubleshooting, interpersonal skills, cross-functionality, automated tests, task management, databases, embedded systems, algorithm development