Anant Shyam

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Education

Cornell University College of Engineering Ithaca, NY

Bachelor of Science in Computer Science, Minor in Applied Mathematics *August 2021 – May 2025*

- GPA: 3.817 (Cornell Engineering Dean's List Scholar)
- Relevant Coursework: Analysis of Algorithms, Machine Learning, Functional Programming, Data Structures, Discrete Mathematics, iOS Development, Probability, Linear Algebra, Multivariable Calculus

Professional Experiences

Cornell University Computer Systems Laboratory Ithaca, NY

Machine Learning Researcher *August 2022 – Present*

- Researching under the guidance of PhD student Niansong Zhang and Professor Zhiru Zhang.
- Working on a research project which aims to deploy and optimize binary neural networks on an Associative Processing Unit (APU).
- Using the GVML library to develop a ReLu layer for the binary neural network, which aims to process and filter large matrices of information.

Cornell University Department of Computer Science Ithaca, NY

CS Course Staff *August 2022 – Present*

- Selected to be on the course staff for the Data Structures and Python courses based on my mastery of the material. Grading exams and programming assignments, and offering actionable feedback to students.
- Holding office hours and leading discussion sections for approximately 800 students to reinforce key software development concepts including data structures, loops, recursion, GUIs, and object-oriented design.

Interactive Brokers Greenwich, CT

Software Engineer Intern *June 2022 – August 2022*

- Enhanced the tool that the Risk Team uses to approve or reject margin changes for a particular stock. Incorporated a margin rule input field in the program to ensure that all stock related rates were calculated correctly. This can help potential investors decide whether they want to borrow money from the brokerage firm to invest in a stock.
- Retrieved margin-rates related data from numerous relational databases using SQL, stored the data using Perl, and displayed the data for the user on the UI using HTML and JavaScript.
- Developed a Python script which takes the number of outstanding shares as well as the registration date from a CSV file and updates the appropriate relational database with this information.

Selected Projects

FindMyParty | *Python, Swift, Flask, Firebase, Alamofire, Ruby, Git*

- Programmed on a team of five to develop an app which registers local parties nearby and allows users to search for and add their own parties through a map-view and various table-views.
- Developed the frontend using Swift and UIKit, and made multiple HTTP requests using Alamofire. Backend was built with Python, Flask, and a SQL-Alchemy object-relational mapper, and contained 10+ routes and was deployed on Heroku. Used Firebase Authentication, Image Storage, and Google Maps SDK Implementation with custom markers and infowindows.
- Won second place overall out of approximately 30 teams in the Cornell University AppDev Hack Challenge.

Cornell Monopoly | *OCaml, Git*

- Led a team of 4 software engineers to develop a fully-functional command-line based game of Monopoly, based on Cornell University themed locations.
- Developed the frontend and backend of the system using OCaml. Implemented the classic Monopoly features including buying and selling properties, receiving Chance and Community Chest cards, and going to Jail. Used the Yojson and ANSITerminal libraries to enhance game functionality.

Technical Skills

Languages: Python, Java, OCaml, Swift, PHP, Perl, SQL, HTML, CSS, JavaScript, Bash, LaTeX
Developer Tools/Technologies: Git, Atom, Visual Studio Code, PyCharm, XCode, Eclipse, Linux, Vim
Libraries/APIs: Yojson, ANSITerminal, pandas, NumPy, Matplotlib, scikit-learn, GVML, Keras, Alamofire, Snapkit