

# Nikhil Dhawan

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## Education

### Cornell University

Ithaca, NY

Aug 2015 — May 2019

### Bachelor of Science, Computer Science, *cum laude*

Hunter R. Rawlings III Presidential Research Scholar

Minors in Electrical & Computer Engineering and Business

Major GPA: 3.733, Cumulative GPA: 3.573

## Professional Experience

### Google

New York, NY

Nov 2021 — Present

### Software Engineer

- Ads Optimization and Recommendations

### Microsoft

Redmond, WA

Aug 2019 — Nov 2021

### Software Engineer

- Engineered ML models, data systems, and pipelines, conducted efficiency research for the Azure Compute fleet, and reported to the Senior Director of Economics in Azure
- Created and maintained automatic data ingestion pipelines using pySpark, Databricks, Azure Data Factory, and an internal ETL tool
- Engineered statistical models leveraging large datasets of Azure usage data to scientifically determine marginal costs, customer price sensitivity, and optimal prices for several Azure products
- Developed a neural network model with tensorflow to predict the probability an Azure customer will experience an allocation failure
- Pricing changes as a result of my work will lead to > \$100mm in additional yearly revenue and reduction in COGS for Microsoft
- Mentored a summer intern: supervised project, taught python, pandas, and Azure Cloud suite

### Human Robot

### Collaboration Group

Ithaca, NY

Feb 2016 — May 2019

### Undergraduate Researcher

- Implemented real-time computer vision in Java to recognize objects with fiducial markers
- Architected a low-latency multi-threaded system with parallelized back-end computations and a mixed-reality UI
- Co-authored best paper at the 2018 DCC Conference, paper at the 2020 IVA Conference, and paper at the 2021 DIS Conference

### The Blackstone Group

New York, NY

May 2018 — Aug 2018

### Software Engineering Intern

- Rearchitected data-retrieval pipeline from an HTTP request model to an asynchronous publisher-subscriber model
- Eliminated timeouts from large web requests in a C# and .NET system using SignalR web sockets
- Reduced cache read time by 80% using GZip compression
- Implemented lazy-loading of data requests on the UI in JavaScript for improved page-load times

## Leadership & Teaching

### Cornell Venture Capital

Ithaca, NY

Feb 2017 — May 2019

### Senior Project Manager

- Performed market analysis and due diligence, constructed slide decks, and presented research to associates and partners at leading VC firms such as Google Ventures, Citi Ventures, Bessemer Venture Partners, and Envision Ventures
- Won 2nd pl. at the National Venture Capital Investment Competition

### CS 4780 — Machine Learning

Ithaca, NY

Jan 2018 — Dec 2018

### Teaching Assistant

- Previously TA for CS 4410 — Operating Systems
- Held office hours to instruct and help students, created assignments and homework, and graded student projects and examinations

## Skills

### Languages

Java, Python, C#, C, SQL, TypeScript, OCaml, Matlab

### Tools/Frameworks

Azure, pySpark, Databricks, React, ROS, git, .NET, SignalR, pandas, numpy, LaTeX

## Coursework

### Computer Science

Data Structures  
Functional Programming  
Operating Systems  
Analysis of Algorithms  
Computer Networks  
Machine Learning  
Artificial Intelligence  
Advanced Machine Learning

### Electrical & Computer Engineering

Electrical Circuits  
Digital Logic  
Embedded Systems  
Microelectronics

## Awards

### Best Paper Award

Awarded to the best peer-reviewed paper at the 2018 Design Computing & Cognition Conference

### CS Departmental Honors

Awarded to CS undergraduates who maintain a high GPA while pursuing academic research and graduate-level coursework

### Hunter R. Rawlings III Presidential Research Scholar

Research grant awarded to less than 1% of the incoming Cornell class for demonstrated excellence in scientific research