# ADITYAVARDHAN AGRAWAL

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## EXPERIENCE

**MongoDB**                                                                                    *New York City, New York*
Software Engineer 3, *Query Execution*                                                          Feb 2024 - Present

- Implemented multi-planning algorithms for the SBE engine, improving performance by 10x for long-running queries.
- Lead cross-team initiative to modernize mongodb diagnostic commands, design scope and syntax documents.
- Developed testing framework for early bug detection; delivered engineering-wide talk, boosting adoption across teams.
- Mentor new graduates, and interns: fostering a supportive learning environment and promoting career growth.
- Handle critical customer escalations, improving customer satisfaction and release safety.

Software Engineer 2, *Query Execution*                                                          Aug 2022 - Jan 2023

- Implemented high performance $replaceRoot, $project aggregation stages to extend the capabilities of the SBE engine.
- Rotated across Server Serverless and Cloud Serverless teams, gaining various business functions knowledge.

Software Engineering Intern, *Query Execution*                                                  Jun 2021 - Aug 2021

- Implemented high-performance VM functions using **C++**, extending new query engine capabilities.

**CLSA**, *Mumbai, India*                                                                        Jun 2019 - Aug 2019
Software Engineering and Automation Intern

- Created a news scraper in **Python** to scrape, clean, and aggregate data from **18 news websites**.
- Replaced the use of Google alerts and physical papers, significantly decreasing analysts' time spent on news.

## EDUCATION

**Cornell University**, Ithaca NY                                                               May 2022
Bachelor of Science in Computer Science | Minor in Business | **GPA**: 3.803

Tata Scholarship (**$250,000** scholarship for undergraduate education)
Academic Excellence Workshop Facilitator (CS 3110: Functional Programming in OCaml)            Aug 2021 - May 2022
Teaching Assistant (ENGRD 2700: Probability and Statistics)                                     Aug 2020 - Dec 2020
Teaching Assistant (CS 2110: OOP and Data Structures in Java)                                    Aug 2019 - May 2020

**Relevant Coursework**: CS 5412: Cloud Computing | CS 4820: Analysis of Algorithms | CS 4410: Operating Systems | CS 4320: Database Systems | CS 4780: Machine Learning | CS 4110: Programming Languages | CS 4670: Computer Vision | CS 2800: Discrete Math | CS 2043: UNIX tools and scripting

## PROJECTS

**Cow Image Recognition Pipeline**                                                              Feb 2021 - Jun 2021

- Designed, implemented and deployed a microserice on Azure to identify and track cows at Cornell University's Dairy Farm.
- Worked on the function layer to create an API to easily add new ML models on the pipeline. Used **Python**, **Azure CosmosDB**, **Azure Functions**, **OpenCV**.

**Cornell Autonomous Sailboat (CUSail)**                                                        Aug 2019 - Dec 2020
Software Engineer on the Navigation Team

- Designed and implemented **multi-threaded sailing algorithms** & APIs to interact with sensory systems from scratch on the PIC32 micro-controller in **C**.

## SKILLS

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|---|---|
| **Languages** | C++, Python, OCaml, Javascript, Java, C |
| **Technologies** | MongoDB, FastAPI, Node.js, PostgreSQL, Express, GraphQL, Flask, Git, Azure, AWS, Numpy, Pandas, Sci-kit learn, pytorch |