

Michael Cai

michaelcai0213@gmail.com | <https://github.com/michael0419> | <https://www.linkedin.com/in/michaelcai0213/>

EDUCATION

New York University, Graduate School of Arts and Science
Masters of Science in Computer Science | GPA: 3.89/4.00

New York, NY

Expected May 2024

Queens College CUNY

Queens, NY

Bachelor of Science in Computer Science | GPA: 3.97/4.00

May 2022

Relevant Coursework:

Data Analytics, Cloud Computing, Graphics, Data Structures & Algorithms, Databases, Internet & Web Technologies

SKILLS

Programming: C, C++, Java, Python, JavaScript, HTML, CSS, Node.js, React, SQL

Technologies: Git/Github, Docker, Tensorflow, VS Code, Eclipse, Pandas, Scikit-Learn, MongoDB, Linux

PROJECTS

Animated 3d Objects with Raster Pipeline (C++), CSCI GA 2270 Computer Graphics, New York University April 2023

- Wrote linear transformations and shading code for vertex, fragment, and blending shaders to render 3d objects.
- Investigated a bug that TAs were not able to solve to improve accuracy of project outputs.

Text Processing with Spark (Python, Google Cloud), CSCI 381 Cloud Computing, Queens College April 2022

- Deployed a Spark cluster on choice cloud provider through independent research.
- Worked through inaccurate official documentation to run pySpark tasks on Google Cloud VMs.

TitleSkimmer (Python, Tensorflow) Dec 2021

- Constructed a language processing web app using Scikit-Learn, Tensorflow, and Flask to categorize titles.
- Trained two different predictive models, one with multinomial bayes, one with neural networks.
- Performed data exploratory and cleaning on a dataset of over 200,000 entries.
- Presented the final product to 40+ attendees at Cuny Tech Prep Demo Night.

ShortUrlScanner (Javascript, Node.js) Dec 2020

- Created a Node.js server to scan potentially malicious URLs and return a shortened result URL for easy sharing.
- Incorporated the use of OAuth 2.0 APIs and caching to reduce excess api calls.
- Implemented request processing in Node.js to protect against improper usage.

RELEVANT EXPERIENCE

BigSibTutors New York, NY

Operations and Automation Manager Aug 2022 - Present

- Developed 5+ different automated scripts to increase efficiency in notifications and data processing.
- Managed design and content updates to the company website and Youtube channel.

CUNY Tech Prep New York, NY

Fellow, Data Science Jun 2021 - May 2022

- Learned Python 3, Jupyter Notebooks, Pandas, Numpy, Scikit-learn, SQL, exploratory data analysis (EDA), feature engineering, data collection and processing, statistical modeling, data visualization, and ML techniques.

QC Learning Commons, Queens College Queens, NY

Tutor, Databases Mar 2021 - May 2021

- Acted as a technical resource for 100 + students in the course "Database systems" and held weekly office hours
- Recommended by professor to assist students through Zoom in their coursework for databases and using T-SQL

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More than just the resume

Hello, I am Michael Cai. Let me introduce myself.

This is who I am:

- A current masters student at NYU's Graduate School of Arts and Sciences in the Courant MSCS program.
- Eager to learn about the various systems that exist in computer science from websites and web serving to machine learning, cloud computing, graphics, and cyber security. Many of which I have completed projects to reflect my experience with them.
 - I pursue experience in various CS fields to gain a better perspective for projects I'll work on in the future.
 - To me, the concepts and practice in CS in various fields provide different patterns of thought and can inspire novel ideas for how one can tackle a problem.
- A believer in supportive teamwork.
 - As a team leader, I have emphasized transparency in what members are willing to do as well as providing a way for members to get support if they find themselves stuck.
 - I have successfully led and participated in various group projects with positive feedback.
 - In a database building project, I supported my peers who had questions about the material and aided in their understanding. They have mentioned this to my professor who then gave me a recommendation to be a college tutor for that course.
 - In a mobile app development project with a size of 6, I helped the team navigate various aspects of a mobile app from functional requirements, to the UI, and the database.
 - My main role was in the database feature as I was the only one with familiarity.
 - Even then, I was responsive to feedback of what the group wanted, provided examples and suggestions at different stages, and connected with members that were stuck.
 - We pulled off a successful project despite scheduling challenges. One member even told me that they were willing to work with me no matter where I go.
- Interested in growth as a developer
 - I am young and green when it comes to professional software development. I am enthusiastic to improve in this area and see where it takes me.
 - I am ready to make mistakes and learn from them. I expect that there are areas where I can see myself improve with new experience and opportunities to carry forward what I learn.
 - I want to reach a point where I can be a great mentor for other developers as I have been as the head of engineering of my high school robotics team. Nothing makes me happier than to be able to support a team with a dream using experience that I have cultivated. I also have great respect for those that mentor others.

Hobbies

Outside of academics, who am I?

- Casual Camera Enthusiast - I thoroughly enjoy the technology used in dedicated cameras and occasionally take pictures for friends.
- Self Hosting Beginner - I have recently been exploring self-hosted technology and have put into practice my own virtual private server for a secure cloud storage solution as well as a private Minecraft server.
- Computer Hardware Follower - Simply put, I enjoy looking at advances in computer hardware.

Feel Free to Contact Me!