## JAMES CHEN

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## EDUCATION

New York University, College of Arts and Sciences**,** New York, NY May 2025

Bachelor of Science, Computer Science, GPA: 3.87 / 4.00

* Relevant Coursework: Data Structures and Algorithms in Python, Object-Oriented Programming in C++, Computer Systems Operations, Calculus I & II, Discrete Mathematics
* Deans List Fall 2021 – Spring 2023

## COMPUTER SKILLS

* Proﬁciency in object-oriented languages: Python, Java, C++, C
* Proﬁciency in website development languages: HTML, CSS, Javascript
* Proﬁciency in Microsoft Oﬃce Suite and Autodesk Fusion 360
* Solid understanding of relational database concepts and SQL
* Solid understanding of data structures and algorithms
* Familiar with data analysis using Tableau

## EXPERIENCE

**Flexible AI-enabled Mechatronics Systems Lab**, New York University January 2023– Present

* Preprocessed datasets and trained ConvNets (CNN) models using Google cloud servers, Pytorch, and Roboflow with other team members while advised by Dr. Ray Li.
* Performed model evaluations, hyperparameter tuning, and augmentation to achieve 99.5% accuracy
* Developed embedded systems in Python for 6-DoF robotic arms by implementing CUDA, OpenCV, and custom CNN models (YOLOv5) for real-time image classification tasks such as active object tracking and manipulation.

**Peak Datathon**, New York University November 2022

* Utilized Python to develop Alternating Least Squares machine learning model to recommend a personalized list of products to online shopping users given over 100,000 e-commerce purchases as data.
* Achieved prediction of on average 2.07 points off of actual rating out of five.

**SmartCup Project**, New York University Feb 2022 – May 2022

* Employed AutoCAD Fusion 360 with team of 3 to build and design 3D printed smart cup that heats and cools liquid to desired temperature with working temperature display.
* Utilized C++ to progam sensors, buttons, and LED screens using Arduino IDE.
* Chosen as 3rd out of over 50 groups for Nick Russo Award and rewarded an additional grant from NYU Tandon.

**Data Science Bootcamp**, New York University Feb 2022 – April 2022

* Utilized Python libraries Pandas, Numpy, and Sklearn to create prediction model of New York City AirBnb prices based on location, rooms, beds, etc using linear regression algorithm.
* Trained/tested algorithm on over 37,000 AirBnB entries
* Algorithm closely followed pricing trends with high R^2 values on relevant factors.
* Applied exploratory data analysis, data wrangling, model construction, and visualization using Tableau.

**Chemistry Research Project Using Artificial Intelligence (AI)**, Chemistry and Chemical & Biomedical Engineering Department, University of New Haven, New Haven, Connecticut Mar 2020 – Dec 2021

* Conducted research on a chemistry project under the guidance of Professor Dequan Xiao, a nationally-recognized computational chemistry scholar.
* Self-studied Python and mathematical models behind simple ML algorithms.
* Implemented AI neural networks using Pybrain to ﬁnd the relation between the structure of a copper molecule and its binding energy, with the implications of discovering more eﬃcient catalysts to convert natural gas to oil.

**Fundamentals of Website Development Course**, Harvard Summer School, Cambridge, MA Jul 2020 - Aug 2020

* Developed a music recommendation website using HTML, CSS, SQL, and Javascript, which connected to a MySQL database.