

Thomas Huang

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Education

New York University

Sep 2019 - May 2022 (Expected)

BACHELOR OF ARTS IN COMPUTER SCIENCE AND ECONOMICS

New York, NY

- GPA: 3.965/4.000
- CS Courses: Data Structures, Computer Systems Organization, Operating Systems, Basic Algorithms, Linear Algebra, Statistics
In progress: Applied Internet Technology, Agile Software Engineering, Data Management and Analysis
- Econ Courses: Intro to Microeconomics, Intro to Macroeconomics, Intro to Econometrics, Money & Banking, Microeconomic Analysis

iXperience

July 2021 - Aug 2021

INTRO TO DATA SCIENCE COURSE

Cape Town, South Africa (remote)

- Six-week crash course on data science fundamentals and techniques.
- Basics of data wrangling, feature engineering, linear/logistic regression, PCA, clustering, decision trees/ensembles, support vector machines, natural language processing, and neural networks.
- Python libraries used include numpy, pandas, seaborn, scikit-learn and keras.

Skills

Languages Java, JavaScript, Python, SQL (MySQL), C, C++, HTML

Programming OOP, dynamic programming, debugging, reverse engineering

Data Science data wrangling/analytics, numpy, pandas, seaborn, predictive modeling with scikit-learn, neural networks

Web/Database node.js, Express.js, Handlebars.js, MongoDB, Mongoose

Other Tech Git/GitHub, Eclipse, Vim, VSCode, Conda, Jupyter, Unix/Linux, MS Office, OBS, FL Studio 12

Experience

DataProphet

July 2021 - Aug 2021

DETECT DATA SCIENCE INTERN

Cape Town, South Africa (remote)

- DETECT project to detect anomalies in industrial-manufacturing machine behavior.
- Preprocessed multivariate time-series data in Python.
- Researched various neural networks on sample data for unsupervised learning (VAE, CVAE, CycleGAN, TadGAN [OrionML]).
- Developed LSTM autoencoder in Keras for time-series anomaly detection with hyperparameters and visualized reconstructions.
- Maintained/versioned code, researched future improvement of LSTM AE model using adversarial critic networks.

Projects

Personal Website October 2021. Static HTML website at <https://platypus.house>, served on Github Pages. Contains an expanding catalog of my information, projects, and hobbies.

COVID-19 Vaccination Data Analysis July 2021. Cleaned and enriched public global vaccination data with geographical/regional data in Python. Explored and visualized various dimensions of the data (type, quantity, and percentage of population) by country and continent, and made projections for when major countries would reach certain vaccination thresholds using FBProphet.

File System Simulation in Linux April 2021. Implemented a rudimentary classical disk-based file system using FUSE in C. Uses skewed-tree disk block allocation, supporting directories and allowing for file sizes up to 4 GB.

COVID-19 Twitter Bot March 2020. Contributed to web-scraping Python script to extract COVID-19 data from an API and post to a Twitter bot; the bot also responded to reply queries, such as total COVID-19 deaths for Illinois.

Course Registration System Software February 2020. Designed a university course registration system in Java that allows creation, deletion, and manipulation of course and user-login information. Supports serialization to save and reload data.

Extracurricular Activity

2021 **Member**, NYU Data Science Club

New York, NY

2019-2020 **Volunteer Piano Teacher**, NYU Musical Mentors Collaborative

New York, NY

2019 **English Camp Counselor**, Josiah Venture

Třebíč, Czech Rep.

2018 **1st Prize**, American Protégé International Piano and Strings Competition, 4-Hand Piano Duet

New York, NY