

# Matthew Wang

Former CS teacher looking for Data Sci / Eng role

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For 5 years, I've taught some very smart high schoolers how to code and crunch data. I've become a fast learner of new tech and an effective communicator of complex ideas, just to stay ahead of my students. Now, I want to learn how to do data science/engineering at industry scale. I love collaborating, and am looking for a team with opportunities for both mentorship and self-initiative.

## </> Relevant Experience

### Bergen County Academies

CS Teacher for the Academy of Technology and Computer Science

Sep 2018 – Jun 2023

Hackensack, NJ

- Designed original curricula for new *Artificial Intelligence* and *Machine Learning* electives in **Python**
  - \* Built interactive visualizers for search & game algs as demo & assignments (see PROJECTS)
  - \* Designed series of Colab notebooks [pandas, scikit-learn] with custom datasets for lessons & projects
  - \* Mentored advanced student research projects [Tensorflow, Keras, PyTorch, and DGL]
- Led collaborative effort to update **C Programming** course env from Cygwin to an **AWS** EC2 cloud server
  - \* Created EC2 image and wrote scripts for automated file system setup, user & key management, and batch grading, improving efficiency of course setup and management
- Revamped *Web App Dev* elective sequence, updating tech stack from using PHP to **NodeJS**
  - \* Integrated 3rd-party authentication [Auth0] and cloud deployment [AWS, Heroku, Railway]
  - \* Condensed curriculum into a set of comprehensive tutorials (🐙 /inventory-webapp-tutorial-series)
  - \* Changes led to significant increase in quantity and quality of web apps built for CS Capstone (see below)
- Dramatically restructured CS Capstone, the culminating 12th-grade team project course, to better guide students through the process of building complex apps for clients by incorporating **Agile** management
  - \* Managed dozens of projects with varying tech stacks [React, Django, Flask, mongoDB, Firebase, etc.]
- Contributed to multiple other cross-teacher courses, such as AP CS A [Java] and SQL [MySQL], by developing curricula, lessons, coding exercises, test cases, and auto-graders

### TripAdvisor

Data Science Intern

Jun – Aug 2016

Newton, MA

- Developed new models for customer value estimation based on SEM data [Python, R, Hive, Google Ads]

### Logos

Software Dev Intern

Jun – Sep 2015

Bellingham, WA

- Developed song file parsers and a live Twitter wall for Proclaim presentation software [C#, JS]

## 🔧 Projects

### SongSets

🐙 /matthew-h-wang/songsets 🌐 songsets.up.railway.app

- Web app [NodeJS, MySQL] for band members to collaboratively build setlists & analyze song usage
- Personal project, inspired by my wife and I's need to plan & track church music across weekly services

### AI Algorithm Visualizers

🐙 /atcs-wang/AI\_Lab1\_Search 🐙 /atcs-wang/AI\_Lab2\_Games

- Interactive visualizers [Python] for search & game algs, designed for demos & assignments for AI elective
- Abstract & extensible framework allows algorithms to apply across multiple visual environments

## 🎓 Education

### Princeton University

Bachelor of Science and Engineering in Computer Science - 3.7 GPA, Magna Cum Laude

Princeton, NJ

Certification in Teacher Preparation in Mathematics

May 2016

May 2017

**Coursework includes:** A.I., M.L., Information Security, Theory of Algorithms, Functional Programming, Computer Architecture, Graph Theory, Combinatorial Math, Probability & Stochastic Systems, Linear Algebra