

Matthew Wang

Former CS teacher looking for SWE role

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For 5 years, I've taught some very smart high schoolers how to code. 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 develop products and tools at industry-level strength and 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

- > 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.]
- > 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
- > 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

Faithlife

Software Dev Intern

Jun – Sep 2015

Bellingham, WA

🔧 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

Certification in Teacher Preparation in Mathematics

Princeton, NJ

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