

Madison Wang

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EDUCATION

Stanford University — BS in Computer Science. GPA: 3.7

Fall 2017 – Exp. Grad: June 2021

CS 221: Artificial Intelligence: Principles and Techniques

Math 51: Linear Algebra and Multivariable Calculus

CS 230: Deep Learning

CS 110: Principles of Computer Systems

CS 161: Design and Analysis of Algorithms

CS 109: Probability for Computer Scientists

CS 224N: Natural Language Processing with Deep Learning

CS 107: Computer Organization & Systems

STRAMGT 366: The Startup Garage: Testing and Launch (GSB)

CS 142: Web Applications

PROFESSIONAL EXPERIENCE

Facebook — *Software Engineer Intern*

June 2019 - Current

- Built, deployed, and iterated on a PyText classifier for non-consensual intimate images (revenge porn) on Facebook
- Developed widget that transcribes any text found on images to English, providing content reviewers (labelers) with more context

Aerobotics — *Deep Learning Intern*

March 2019 – June 2019

- Built algorithm to find visually similar images using unsupervised ML (Beta Variational Autoencoders)
- Given an image of a diseased crop, the algorithm will locate the other diseased crops in the farm's image bank

Facebook — *Software Engineer Intern*

June 2018 - August 2018

- Developed an Android app in Java that reduces political polarization in media; Collaborated with two others on Github.
- Built infrastructure and used synchronization techniques to control access to common resource by multiple threads.
- Created news population algorithm: Given user's political affiliation, generates & utilizes beta distribution (PDF) to curate news feed.
- Built user interface, data visualization platform, SQLite client-side handlers, & client to parse and display top news from external API

Medtronic — *Software Engineer Intern*

June 2017 - August 2017

- Developed Excel software in VBA that saves Medtronic \$400,000+/year (2 FT) by optimizing the data collection & lab testing process
- Gained practical knowledge of product development life cycle by bringing an idea from concept to prototype
- Gathered user needs & materialized them into Excel Macro functions & features. Performed cyclic code reviews & implemented feedback during development. Developed documentation suite for macro installation. Trained 60+ people on using the macro.

STARTUP INITIATIVES

Private-Label Amazon Business: izyla — *Sole Proprietor / Store Owner*

Oct 2018 – Current

- \$25k Monthly Revenue. \$10k Monthly Profit. Link to Stats: <https://imgur.com/a/fR89FcB>
- Through extensive product research, found viable niche for product and effectively differentiated product from competition
- Facilitated negotiations with China supplier resulting in high profit margins (40-50%) and quality-assured goods
- Launched product successfully— in 2.5 months, product ranked from #1378 to #5 of niche and gained 70 reviews (4.3 stars average)
- Managed Amazon and Facebook advertising campaigns, increasing the ranking of product while maintaining profitable margins

WatchItBand LLC — *Founder*

July 2016 – Jan 2018

Sexual assault prevention wearable. Can send texts for help or call to police through 1 click. Incorporated, provisional-patented.

- Developed front-end and back-end for company website
- Engineered working MVP prototype with Arduino; created app mockups; designed the user interface for Android app
- Conducted market research by interviewing UPenn students, iterated on their feedback, and compiled business plan.

Cheesium — *Server Owner*

July 2012 - August 2015

Minecraft Multiplayer Server that was first ran off laptop & grew into a 5-figure startup

- \$61k Total Revenue. \$39k Profit.
- Individually managed hardware investments (*ddos-protected 64GB Intel Xeon E5 E5-1620v2*), software (CentOS, coding java plugins), and ingame mechanics (buildings, gameplay, ranks, player-retention) of multinational Minecraft server
- Managed investments and advertisements up to \$1,700 and partnered with famous Youtuber JeromeASF (4.3+ million subscribers)

PROJECTS & SKILLS

Programming

- Character Aware DOC Language Model (Python) [NLP] March 2019
Created custom architecture, generating word embeddings with char-level CNN and feeding output to SOTA DOC NN
- Synthetic Aging of Faces (Python) [Deep Learning] Dec 2018
Used CGANS and CAAE to synthetically age an image of a person's face across various age groups.
- PianoNet: Deep Neural Network for Automatic Music Transcription (Python) [Deep Learning] June 2018
Collaborated on DNN that converts WAV recordings of piano music to .MIDI music score

Web Development

- Developed 10+ websites. Portfolio link (maddiewang.com/web-design)

Proficient in:

Experienced in:

- Python, Java, C++, C, Unix, AWS, HTML/CSS, React, PyTorch
- SQL, JS, PHP, Tensorflow