

DAVID ZHAO

SOFTWARE ENGINEER

Using machine learning to make our lives more productive and impactful

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111 Shamrock Rd, Charlottesville, VA 22903

EDUCATION **University of Virginia**, Charlottesville, VA Aug 2016 - May 2020

Double major B.S. Computer Science and Statistics, Overall GPA - 3.90, Major GPA - 4.00

Machine Learning, Computer Architecture, Theory of Computation, Regression Analysis, Math Statistics

Program & Data Rep., Linear Algebra, Probability, Discrete Math, Multivariable Calculus

Thomas Jefferson HSST, Alexandria, VA - *Web/Mobile App Development Senior Lab*

Sep 2012 - Jun 2016

WORK **Innovative Defense Technologies**, *Software Engineer Intern* May 2017 - Aug 2017

Developed a socket-based chat plugin from scratch as internal & maintainable alternative

Typescript, JS, Java

Wrote automated unit tests, learned BackboneJS, coded REST backends, wrote build scripts

Typescript, JS, Java, Bash

US Army Corps of Engineers, *Research Scientist Intern*

Jun 2015 - Aug 2015

Developed algorithms to reduce setup and querying computations of a K-nearest neighbors on a spatial index

Python

TJ Middle School Tech Institute, *Teaching Assistant*

Jul 2014 - Aug 2014

Taught 120 middle school students basic app development in workshop and one-on-one settings

STEMbassador Tutoring Program, *Volunteer/Tutor*

Feb 2013 - Jun 2016

Tutored dozens of at-risk middle school students and two high school students on math topics

ACTIVITIES **HackUVA**, *Treasurer, Organizer, Mentor, Participant* Mar 2014 - Present

Treasurer for HackUVA '18. Organized HackUVA '17 personally contacted 65+ sponsors and arranged all caterers

Participated in 8 hackathons, mentored 2 middle school hackathons

Java, JS, Node, PHP

Cavalier Symphony Orchestra, *Chief Technology Officer, Principal Trumpet*

Sep 2016 - Present

Developed website using various javascript libraries and streamlined technology within the club

JS, PHP

Natural Language Processing (NLP) Research Group

February 2017 - May 2017

Explored NLP and deep learning which entailed weekly meetings discussing current research

Took online courses in Machine Learning and tried different python libraries

NumPY, Tensorflow

Rubik's Cube Club, *Developer/Co-President*

Nov 2015 - Jun 2016

Elected co-president to develop high school's Rubik's Cube club website and manage communications

JS, PHP

PROJECTS **Optical Music Recognition** Aug 2017 - Present

Implementing convolutional neural networks to convert sheet music into an editable format

Python

Basic Recurrent Neural Network

Jul 2017

Created a recurrent neural network that generates text in the prose of the training text

Python, Theano

Neural Network in Google Sheets

Jul 2017

Implemented and trained a neural network with programmable hyperparameters in Google Sheets

Anacostia National Park App

Jul 2015 - Jul 2016

Created a geo-narrative audio tour guide app in coordination with an Anacostia National Park representative

Java

SKILLS **Languages** – Python (3yrs), Javascript (8yrs), Java (4yrs), C++ (1yr), HTML, CSS, Typescript, Bash, PHP

Libraries – JQuery, NumPY, Bootstrap, Underscore, Backbone

Software and Tools – Git Bash, Selenium, VS Code, Linux, Powershell, Android Studio, Unity 3D

GITHUB

www.github.com/davidbzhao

LINKEDIN

www.linkedin.com/in/davidbzhao

WEBSITE

davidzhao.me