

Willem Mirkovich

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303-885-9685

EDUCATION

University of Colorado, Boulder, CO
Bachelor of Science, Computer Science, GPA: 3.91 2018- Expected May 2020

University of Washington, Seattle, WA
Pre Engineering, Computer Science and Math, GPA: 3.66 2016-2018

AWARDS

Dean's List, University of Colorado Boulder 2018-2019

Engineering Transfer Scholarship, University of Colorado Boulder 2018

Dean's List, University of Washington 2016-2018

EXPERIENCE

Full Stack Developer Intern November 2018-Current
Anark Corporation 2970 Wilderness Place Suite 110, Boulder
Part of Full Stack Development team during school year part-time.

- Created Node.js server with Puppeteer to automate testing of webpage images
- Revamped TypeScript Testing framework from embedded JavaScript to native TypeScript tests using Jasmine
- Created SDK package of TypeScript Declaration files to allow for TypeScript API development
- Developed on .NET platform using Test-Driven Development

Research Assistant/Developer August 2019-Current
University of Colorado Boulder 3775 Discovery Drive, Boulder, CO
Working with Professor Tomoko from CU Aerospace Engineering on AMGeO project.

- Currently working on expanding AMGeO with state evolution model to predict future states in the atmosphere using machine learning
- Added security features to website using JSON Web Tokens
- Automated user integration with Github project using Github API
- Developed using Flask microframework and Python

Software Developer Jan 2020-Current
University of Colorado Boulder CU Boulder, CO
Hired as software developer for the project Numberscope to help build, test and deploy website/tool for visualizing number sequences from the OEIS database.

Teaching Assistant Jan 2019-May 2019, Aug 2019-Dec 2019
University of Colorado Boulder CU Boulder, CO
Lead weekly outside work group for Discrete Structures Computer Science/Math course at CU Boulder as an undergraduate. Hold weekly office hours for students.

Research Assistant February 2018-August 2018
University of Washington UW Seattle, WA
Hired as Research Assistant within team of undergraduates aiding Professor Pahnke (UW Foster School of Business). Research focused on openFDA analysis to record competitive relationships in medical device industry. Worked as Technical Lead of group.

PROJECTS

AMGeO:

August 2019-Current

Current version of AMGeO that I helped deploy: <https://amgeo.colorado.edu/>

AMGeO is a data science software project funded by the NSF EarthCube program aiming to open up the vast amount of geospace data to a broader audience, while also giving users an access to data analysis tools that help gain meaningful insights. I am participating in the AMGeO project by helping with the release of the open source software and webservice as well as expanding on the core functionality of data analysis tools provided as part of the open source software.

Numberscope:

January 2020-Current

A look at the tool I will be working to deploy by the end of this semester with the Numberscope team: <https://math.colorado.edu/numberscope/Numberscope/toolPage.html> Numberscope builds off of the work started by the OEIS. This database houses information of many number sequences ranging from Fibonacci to the standard integers. Numberscope wants to offer a tool to create visualizations of these sequences to gather inferences not previously seen, such as hard to spot patterns.

There are two main goals that I will be helping the team achieve:

1. Revamp the Numberscope tool. This will include API development to the OEIS, as well as creating JavaScript build tools
2. Deploy a website. This will allow for users to interact with the tool in a live environment to use the tool

Senior Thesis:

August 2019-Current

Currently pursuing a Senior Thesis Capstone. Research will focus on work in pruning the search space of repeated iterations of similar problems to reduce computation time. Applications in Linear Programming, String Search and Shortest-Path Algorithms.

Designing for Defense:

January 2019 - May 2019

Technical Lead and Main Presenter in team of undergraduate/graduate students to find solution posed by US Air Force Special Forces using Lean Launchpad methodology. Designed application to evaluate candidate stress.

Workout Website:

August 2018 - December 2018

Developed workout website with team of undergraduates. Website used algorithm to dynamically create workout for individual based on user statistics and preferences of specific workout. Worked on database management, Javascript layer and server communication. Github: <https://github.com/tyto8880/buffsgitbuff>

COMPUTER SKILLS

Languages: Java, Python, TypeScript, JavaScript, SQL, C#, C, BASH, L^AT_EX.

Web Development: Flask (Python), Node.js, CSS, HTML, Express

Applications/OS: JupyterNotebook, Visual Studio, MongoDB, Azure, VMWare

RELEVANT COURSEWORK

Data Science, Machine Learning, Algorithms, Matrix Algebra w/ applications, Discrete Mathematics, Differential Equations, Database Systems, Calculus 1-3, Data Structures