

Jay Speidell

Software Engineering Data Science



jayspeidell.com*



jayspeidell@gmail.com



github.com/jayspeidell



434.329.2371

*My website shows off some cool projects, check it out!

Education

B.S. Computer Science | 2020
Old Dominion University | 3.94 GPA

B.A. English | 2011 | Virginia Tech

Skills

Programming:

- C/C++
- Java
- Python

Software Engineering:

- Cloud Computing (AWS, GCE)
- Continuous Integration
- Linux/Unix
- REST APIs (Flask)
- SSH
- Unit Testing
- Version Control (Git, Github)

Data Science:

- Data Exploration & Cleaning
 - Pandas
- Data Visualization
 - Folium
 - Pyplot
 - Seaborn
- Machine Learning
 - Numpy
 - Pytorch
 - Scikit Learn
 - Scipy
 - Tensorflow
- SQL
- Statistics

Software Engineering

ODUConnect - Software Engineering Project (Portfolio Link)

An interactive web app to connect industry professionals with mentoring opportunities at ODU.

- Built continuous deployment pipelines.
- Led the front-end design, including process flows, UX, UI, and database requirements.
- Developed and deployed a REST API in Flask.
- Broke front end components into discrete tasks and assigned to team members with instructions and tutorials to implement in ReactJS.
- Presented functional prototype to an industry review board.

CPU Temperature Approximation (GitHub Link)

An approximation and interpolation application with matrix solver module.

- Developed algorithms for matrix solver and cubic spline, linear least squares, and piece-wise interpolation.
- Created unit tests and documentation.
- Wrote application in Python.

PySwarms Open Source Contribution (Portfolio Link)

Open source contributions to a particle swarm optimization research library in Python.

- Created new objective functions for benchmarking and improved existing ones, along with full unit test coverage.
- Discovered opportunity to improve visualization with Pyplot gradients and submitted the feature as a separate pull request.
- Delivered code conforming to contribution guidelines and project style.

Data Science

Toxic Comment Classification (Portfolio Link)

Analysis and modeling of Wikipedia comments.

- Performed a statistical analysis of comment data to inform data processing, feature engineering, and ML strategies.
- Created and tested new features using benchmark models.
- Developed a Support Vector Machine model incorporating a custom Naive Bayes weight feature transformer that effectively identified toxic comments.

Galaxy Zoo Challenge (Portfolio Link)

Describe galaxies with space telescope data.

- Created a data processing pipeline that extracts the region of interest from images and transforms data into Pytorch tensors.
- Developed a convolutional neural network that accurately describes images and achieves goal root mean-square error.

3D Printed Trail Maps (Portfolio Link)

I transform raw elevation, hydrographic, and GPX data into 3D maps overlaid with hiking and mountain biking trails.

Work Experience

Nov'15-Present	Marketing Manager at Momentum, Inc	Seattle, WA
Mar'08-May'15	Special Projects Manager at The Speidell Group	Lynchburg, VA
Jul'11-Mar'14	Kindergarten Teacher at Multiple Private Schools	Seoul, Korea