

# CALEB FEDERMAN

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## SKILLS

**Data Analysis:** Python (Pandas, NumPy, TensorFlow, PyTorch, SciPy, scikit-learn), SQL, Google Cloud Platform, Tableau, Jupyter Notebooks, Web/Data Scraping (Regex, Requests, BeautifulSoup)

**Misc. Software Development:** C, Java, MATLAB, Git, Linux, Docker, Agile methodologies

## EDUCATION

**University of Wisconsin-Madison | B.S. Computer Engineering** | Madison, WI | Expected December 2023

- Double Major: Computer Engineering and Computer Sciences
- Relevant Coursework: Artificial Intelligence, Artificial Neural Networks, Big Data Systems, Discrete Mathematics, Algorithms, Theory and Methods of Mathematical Statistics, Software Engineering

## ENGINEERING EXPERIENCE

**Plug Power - Software Engineering Intern;** Latham, NY

June 2022 - August 2023

- Developed the process for scraping and uploading data (Python, Excel) from old library files for upload to a new universal database, increasing yield from the electrical engineering team
- Reduced controls source code (C programming language) complexity by 77%, improving productivity of all developers through better readability and modularity
- Actively participated in weekly scrum meetings, utilizing Agile methodologies and effective communication to solve problems
- Extended to part-time following the conclusion of the summer internship program while continuing studies and subsequently was invited to participate in the intern program for another summer

## PROJECTS

**Multi-Language Alphabetical Classifier;** Academic Project

September 2023 - Present

- Engineered a CNN in PyTorch to identify characters across a diverse set of languages
- Processed a dataset of 6,831 handwritten English characters, converting them to a uniform grayscale format and resizing them for compatibility with the neural network
- Achieved a 90.17% accuracy on the test set with the CNN model

**DriveAide - Distracted Driving Monitoring Application;** Academic Project

September 2023 - Present

- Developed an Android app (Java) utilizing computer vision to detect driving distractions
- Integrated 40 distinct models for real-time alerting and post-drive analysis
- Coordinated the project using a Jira board, adhering to a biweekly sprint timeline

## OTHER EXPERIENCE

**ChrisCross Foundation - Charity Walk Planning Committee;** Madison, WI

January 2023 - May 2023

- Raised over \$3,000 for suicide, drug abuse, and mental health awareness through the planning of a charity walk which amassed over 100 participants

**University of Wisconsin-Madison, BMRS - IT Support Technician;** Madison, WI

July 2021 - May 2022

- Operated a help desk for 90 workstations and 50 end-users
- Purchased computer equipment for researchers to conduct biomedical experiments
- Managed time effectively between work and study during the semester

**Center for Disability Services - IT Support Intern;** Albany, NY

July 2020 - August 2020

- Assessed and resolved issues regarding missing inventory via communication with end-users
- Conducted system deployment across many locations

**University of Wisconsin-Madison - Intramural Sports Official;** Madison, WI

September 2019 - March 2020

- Enforced the rules of intramural sports in order to maintain a fair and fun environment for all participants
- Determined resolutions to conflicts in fast-paced conditions with a calm demeanor