ALEX EIDT

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Education

University of Washington	**September 2018 – December 2021**
Bachelor of Science in Electrical Engineering, GPA: 3.61	*Seattle, WA*

Relevant Coursework

- Data Structures
- Algorithms
- Computer Vision
- Embedded Systems
- Circuit Design
- Signal Processing
- Cryptography
- Digital Design

Experience

Paul G. Allen School of Computer Science and Engineering	**January 2021 – August 2021**
Teaching Assistant	*Seattle, WA*

- Teaching Assistant for CSE 163, an Intermediate Data Programming course focused on learning Data and Image Analysis in Python using analytic and machine learning techniques.
- Libraries taught were pandas, numpy, scikit-learn, matplotlib and seaborn.
- Co-lead weekly quiz sections of 20 students with fellow TA to review course concepts and go through example exercises.
- Held weekly office hours to answer student questions.

UW Solar	**October 2018 – September 2020**
Web Master and Project Lead	*Seattle, WA*

- Created and designed new UW Solar (uwsolar.be.uw.edu) website using VueJS and NodeJS with a fellow computer science undergraduate.
- Designed the Urban Infrastructure Lab website (uil.be.uw.edu) using WordPress. Held weekly meetings with club officers, faculty, and UW Web developers to guide design and host easily maintainable sites.
- Created documentation for future UW Solar students to easily understand, update and maintain the UW Solar website.
- Project Lead for Manastash Ridge Observatory project. Coordinated site visited to Observatory. Oversaw cost estimation, schematic, and solar array design with UW Solar team to create a proposal and energy audit for a ground mounted solar array at the Observatory.

Projects

ASCII Video Renderer	*Python*	**June 2021 – July 2021**

- Created a script to quickly convert any video file into ASCII form.
- Developed a novel algorithm that is heavily optimized using parallelization and numpy, resulting in conversion speeds of 10 FPS on Full HD video (1920x1080) and 25 FPS on HD video (1280x720).
- Runs 400x as fast as the conventional ASCII image converters.
- Achieved real-time color ASCII rendering on a webcam feed. github.com/AlexEidt/ASCII-Vision
- Created a YouTube video explaining the algorithm.

UW Course Planner	*Python, JavaScript, HTML, CSS, Leaflet, Flask*	**July 2019 – September 2019**

- Created a free Web App with geospatial schedule visualization on a campus map, recursive course prerequisite trees, and course keyword search for courses at the University of Washington. Available at alexeidt.pythonanywhere.com.
- Used Flask for the backend with Ajax and jQuery for the frontend. Built the map visualization with Leaflet.
- Built open source uwtools package in Python for parsing UW course catalog and time schedule websites.
- Presented project to UW IT Academic Experience Design & Delivery Team resulting in a course keyword search feature being added to UW's Course Management Tool.

Basketball Statistics Tracker	*Java, Swing*	**January 2019 – August 2019**

- Created a Java app to keep track of Basketball player statistics in real time.
- Used the Java Swing UI Framework to build an intuitive user interface for creating teams and adding statistics.

Technical Skills

Languages: Python, Java, C/C++, JavaScript, Kotlin, Go, Verilog, LaTeX
Developer Tools: VS Code, IntelliJ, Git
Technologies/Frameworks: Pandas, Numpy, Unix, OpenCV, GraphViz, Swing
Skills: Algorithm Design, Computer Vision, Data Analysis, Resilience, Teamwork