# Alyssa Hanson

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**Education:**

**Bachelors of Science**: Data Science, University of Oregon, OR, USA CGPA 3.89 | June 2024

**Associates of Arts**: Clatsop Community College, OR, USA CGPA 3.84 | June 2022

**Skills:**

* ***Proficient*:** Python, Scikit-learn, py.Torch, Numpy, Pandas, TensorFlow, C, Command Line, Git, Jupyter, Arc-GIS, Q-GIS, R, Linux, Windows, Mac, Ubuntu, Assembly, Kaggle, Pandoc, virtual machines & environments, Google Earth Engine, US Census Database.
* ***Learning*:** React, Docker, MongoDB, Javascript, CSS, HTML, REST, SQL, micro-servers and containers.
* ***Look Forward to Learning:*** AWS, Typescript, C++, C#, Java, NoSQL, Kubernetes, Swift, Go, Large Language Models & processing, end to end development.

**Projects:**

***iNeed Water:***

Using **React** and **JavaScript** to develop a web application that customizes and notifies a user of houseplant watering schedules. Includes **front and back end development,** CSS, HTML, & database management. Work in Progress.

***Soil Respiration Bootstrap Analysis Website****:*

Used **R** to run **exploratory data analysis** on a sparse dataset. With a limited subset of data ran a **bootstrap** simulation to analyze soil respiration levels in China, and analysis of result. With the knitter tool, **CSS,** and **Git**, rendered R markdown file into **HTML** for website production.

**Link** | [Soil Respiration Boostrap Analysis Website](https://alyghanson.github.io/Soil-Respiration-Database-Exploration/index.html)

***Supervised Machine Learning Techniques With Landsat 9 Imagery:***

Quantified pixel value differences using Minimum Distance, and Maximum Likelihood Estimation algorithms alongside the spectral curve of each pixel to determine land and non land pixel values. Used **QGIS** for machine learning simulation, with **Pandas** and **Jupyter Notebooks** for data analysis. Compared the differences of the two outcomes and steps to better this experiment.

**Link |** [Quantifying Two Different Machine Learning Techniques](https://www.linkedin.com/in/alyghanson/overlay/1710547716713/single-media-viewer/?type=DOCUMENT&profileId=ACoAADwI55YBu1wsoT_oGOv-Y7J37VRuypl4DCk)

**Work Experience:**

**Data Science Learning Assistant**  University of Oregon | January 2023 - March 2023

* + - Assisted students with foundational data science techniques by holding office hours and filling in for lab.
    - Dug deeper into **Python**, **Numpy**, and **Jupyter Notebooks** during office hours with group and one-on-one sessions.
    - Led students to understanding of important principles such as: basic statistics, **A/B testing**, **bootstrapping**, **decision trees**, and  **linear & logistic regression**.
    - Reinforced **positive communication** between instructors and students with the hope of creating an enjoyable coding experience that would develop into a well rounded skillset for the students.

**Talent Booker and Sound Manager/Engineer** Fort George Brewery + Public House | June 2020 - June 2022

* + - Managed all aspects of talent booking for multiple live music events per week including large scale festivals.
    - **Communicated** with teams to provide adequate accommodations for talent and team members.
    - **Managed and trained team** of sound engineers to run live sound for multi-band sets, organized all parts of live production including: lighting, audio equipment, financial negation and contracts, lodging, stage managing, etc.
    - Engaged with and **engineered** sound for various talent groups.

**Activities & Honors:**

***Ford Family Foundation Opportunity Scholar***

***Dean’s List***

***Women in Computer Science (WiCS)***

***Non-Traditional Student Union***

**Relevant Coursework:**

Data Science I/II, Principles & Techniques for **Data Science**, **Machine Learning**, **Computer Science** I/II/III, **Software Engineering**, Computer Organization, Programming for Spatial Data Science, R for Earth Systems, **Statistics** for Data Science, Remote Sensing, Geographical Information Science, Linear Algebra I/II/III, Calculus I/II/III, **Data Ethics**