

Spencer Veatch

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EDUCATION

Willamette University

M.S. Data Science; Cumulative GPA: 3.90 / 4.0

B.S. Data Science; Cumulative GPA: 3.85 / 4.0

B.A. Economics; Cumulative GPA: 3.85 / 4.0

KEY SKILLS

Rstudio | Python | C/C++ | ArcGIS | SQL | CUDA | Tensorflow | Pytorch | Docker | Linux | Spark/pyspark | AWS | SageMaker | Numpy | Matplotlib | Seaborn | ggplot2 | Tableau | Git |

WORK EXPERIENCE

Data Scientist

Renewable Resources Group

June 2023 - Present

- Created a machine learning pipeline that ingests and processes diverse climate and satellite data. Developed and implemented a model to generate projections of climate similarity at 25 year increments based on a user-provided point, producing high-resolution and user-friendly output rasters for efficient decision making.
- Engineered a cutting-edge, multi-modal model to produce high-resolution irrigation estimates from satellite images and soil moisture data.
- Optimized algorithms and developed parallelized solutions to improve feature engineering processes and enable seamless handling of large-scale datasets, leading to a significant reduction in runtime.

Student Tutor

QUAD Center, Willamette University

September 2023 - June 2024

- Provided one-on-one and small group tutoring to undergraduate and graduate students in Statistics, Computer Science, and Data Science, helping with a wide range of subjects including study design, data cleaning, data visualization, analysis, modeling, and data communication.
- Supported a diverse range of computing languages including R, Python, and C/C++. Proficiently troubleshooted issues, explained intricate programming and mathematical concepts, and actively contributed to the design of effective solutions for a wide variety of student research projects.

RESEARCH

M3FNet – MGMT Multimodal Fusion Network

- Developed a 3D neural network for detecting MGMT enzyme methylation in glioblastoma patients using only mpMRI images, providing a non-invasive alternative to biopsy.
- Created a novel computer vision approach with custom feature extraction and fusion methods, achieving an accuracy rate of 93% and performing approximately 30% better than most other models in the field.

LCNet – Lesion Classification Network

- Developed a lightweight architecture for skin cancer diagnosis that achieves an accuracy of 91.8% across multiple classes of lesions.
- Achieved performance within 0.4% of state-of-the-art models, demonstrating comparable accuracy with significantly reduced model size.

AdjustR – R Package

- Developing an R package and novel test statistic to identify model misspecification in longitudinal studies. Release is expected in December 2024.

AWARDS

Dale T. Mortensen Scholarship

Willamette University

A prestigious full tuition scholarship awarded annually to one student who displays outstanding achievement in both Economics and Mathematics.

Outstanding Student Research

Consortium for Computing Sciences Northwest

This award acknowledges outstanding achievement in both the quality and content of computer science research, as well as exemplary presentation skills.

