

Parker Carlson

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Education

Oregon State University

September 2019 – June 2023

Honors Bachelor of Science, Computer Science.
3.98 GPA.

Experience

Data Science Intern

June 2022 – Present

Micro Systems Engineering, Inc.

- Constructing TIBCO Spotfire dashboards to provide analytics and visual quality assurance of manufacturing processes
- Reduced manual data examination during root cause failure analysis by 95% using data mining techniques
- Integrating TIBCO Data Virtualization, Spotfire, and Statistica to analyze data and identify abnormal test results
- Presented analytic-enabled dashboards to 20 employees, including 5 department heads

Data Science Intern

June 2021 – August 2021

Viewpoint, a Trimble Company

- Created interactive Domo charts featured in Viewpoint's Executive Quarterly Business Review to inform market decisions
- Forecasted spending in the construction industry using time-series analysis and machine learning techniques
- Optimized frequent SQL queries to reduce length by 64% and execute over 300% faster

Research Assistant

June 2020 – Present

Soundbendor Lab

- Designed and implemented a library for efficient data processing and loading into Tensorflow, used by 10 lab members
- Developed technical tutorials for audio-based machine learning and Slurm used by over 15 lab members
- Analyzed and debugged deep learning models for lab members. Implemented solutions in Tensorflow
- Explained audio deep learning visually with custom graphics created in Adobe After Effects

Projects

Audio Transposition

November 2019 – Present

Soundbendor Lab

- Experimented with the transposition of time-domain audio using deep recurrent neural networks
- Conducted machine learning experiments using Pandas, SK-Learn, and Tensorflow
- Awarded 2nd Place Industry's Choice Award at 2020 OSU Engineering Virtual Showcase. Chosen out of 200 projects
- Presented at the 2021 National Conference on Undergraduate Research

Statistical Analysis of Mood

June 2020 – June 2021

- Analyzed and predicted my daily mood using data science and machine learning techniques
- Cleaned data, selected features, and forecasted daily mood based on tracked personal data

Japanese Character Recognition

September 2017 – June 2021

- Explored few-shot learning with neural networks to improve recognition of handwritten Japanese characters
- Augmented available handwritten character data using generative adversarial networks
- Awarded "Best in Computer Science" and "Outstanding Science Project" at 2018 and 2019 local ISEF events, respectively

Relevant Coursework

Machine Learning and Data Mining: Application of modern data cleaning and machine learning techniques, including deep learning; Pandas, SK-Learn, Matplotlib, Tensorflow

Parallel Programming: Theory and applications of parallel programming; OpenMP, SIMD, Caching, CUDA, OpenCL, MPI

Methods and Models of Applied Mathematics: Exploration of discrete and continuous models and methods for analysis; linear programming, non-linear optimization, least-squares, orthogonal polynomials, Fourier coefficients

Skills

Communication: Led teams of 5+ both in-person and remote, presented to small (2-20) and large (100+) groups

Languages: English (native), French (DELF B2)