Sage Hahn

Data Scientist and Developer

www.sagehahn.com ⌂ | sahahn (GitHub) | publications (Google) | ✉ sahahn@uvm.edu | ☎ 19788313075

EXPERIENCE

GARAVAN NEUROIMAGING LAB | GRADUATE RESEARCH ASSISTANT
Jan 2019 – Current | Burlington, VT

- → Performed data analysis on large collections of high dimensional human neuroimaging data with an emphasis on methods related to machine learning, time-series and network analysis, data visualization and statistical modelling.
- → Participated in local, regional, and international collaborations with other active scientists, resulting in varied publications.
- → Developed and contributed to numerous open-source software projects.
- → Performed analysis and data processing within cloud-based high performance computing environments.

UNIVERSITY OF VERMONT MEDICAL CENTER | MACHINE LEARNING ENGINEER
May 2018 – Jan 2019 | Burlington, VT

- → Designed and implemented 3D deep learning based segmentation and prediction models for treatment related to Abdominal Aortic Aneurysm's as well as C2 spinal fractures.
- → Collaborated closely with both medical professionals and members of the Computer Science department, effectively bridging the gap between experts in disparate fields.
- → Published and presented work in relevant medical and imaging journals and conferences, in addition to an active patent application.

PROJECTS

BRAIN PREDICTABILITY TOOLBOX | PYTHON, JAVASCRIPT
2019-2022

- → Wrote and maintained a python package for performing machine learning on neuroimaging data.
- → Modern, open-source, version controlled, CI tested library with extensive documentation and examples.
- → Interactive GUI written with Javascript, Apache, Docker, PHP and Bootstrap.

AUTOMATED DETECTION OF ENDOLEAK | PYTHON, TENSORFLOW
2018-2019

- → Built an ensemble-based deep learning pipeline for the recognition of endoleak after endovascular abdominal aortic aneurysm repair.
- → Designed a semi-automated 3D CNN for the dense segmentation of patient aorta within CT scan.

EDUCATION

UNIVERSITY OF VERMONT
PH.D. IN COMPLEX SYSTEMS & DATA SCIENCE
Jan 2019 - Oct 2022 | Burlington, VT
Complex Systems Center

UNIVERSITY OF VERMONT
BACHELOR'S IN COMPUTER SCIENCE
May 2018 | Burlington, VT
School of Arts and Sciences

SKILLS

OVERVIEW

- Machine Learning
- Software Engineering
- Data Wrangling & Viz
- Medical Imaging & Analysis

PROGRAMMING

(In order of proficiency)
Python • Bash • JavaScript • C++ • SQL • HTML • CSS • Matlab • R • PHP • Java

FRAMEWORKS/TOOLS

- Numpy, SciPy, Matplotlib
- Scikit-Learn, Pandas
- Tensorflow, PyTorch
- Linux, Ubuntu, Docker
- Git, Github Actions
- Slurm, AWS

COMMUNICATION

- English (native)
- Mandarin (intermediate)
- Spanish (beginner)