Dave Van Veen

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EDUCATION

STANFORD UNIVERSITY
PH.D. - ELECTRICAL ENGINEERING
May 2024 | Stanford, CA

UNIVERSITY OF TEXAS
M.S. - ELECTRICAL ENGINEERING
May 2019 | Austin, TX
GPA 3.8

UNIVERSITY OF WISCONSIN
B.S. - ELECTRICAL ENGINEERING
Dec. 2016 | Madison, WI
GPA 3.9

COURSEWORK

Data Mining • Optimization • Fairness and Interpretability in ML • Probability • Empirical Methods • Digital Signal Processing

PROJECTS

Fair AI Curriculum: Created fairness in ML course on web platform serving 400 high schools nationwide
ML Consultant: Served as key personnel on SBIR grant for small firm
Volunteer Tutor: Provided academic mentorship in STEM courses
Web Development: Used HTML to build web pages for a MOOC site
Electronics Laboratory: Designed, built, and tested a theremin on PCB
Clinical Volunteer: Assisted and socialized with patients hospitalized for extended periods of time

SKILLS

Current
Python • PyTorch • Tensorflow • Pandas • PostgreSQL •Git •Bash • MATLAB • LaTeX• Photoshop • Spanish
Past
Java • Julia • HTML • Altium • CAD

RECREATION

- Ultradistance cyclist
- Outdoors enthusiast
- Amateur photographer
- Personal trainer

TECHNICAL EXPERIENCE

MACHINE LEARNING RESEARCH SCIENTIST | SUBTLE MEDICAL
Fall 2019 - Summer 2021 | Menlo Park, CA

- Developed real-time video denoising algorithms to reduce fluoroscopy radiation – [Patent]. MICCAI-MLMIR [Publication].
- Submitted NIH SBIR proposal as co-principal investigator (funded)
- Led project earning industry contracts with the goal of commercialization
- Collaborated with surgeons from Stanford Hospital to establish clinical viability

RESEARCH SCIENTIST | STANFORD UNIVERSITY
Fall 2020 - Summer 2021 | Stanford, CA

- Developed unsupervised ML methods for signal reconstruction in MRI

RESEARCH FELLOW | DATA SCIENCE FOR SOCIAL GOOD
Summer 2019 | London, UK

- Built machine learning pipeline to analyze 10 TB of data, including both echocardiogram videos and tabular records from patient database
- Performed tasks of classification and segmentation to predict heart function
- Collaborated with cardiologists in Spain to improve clinical diagnosis efficiency
- [Project GitHub]. ICML Global Health publication. Invited talk, Data Day México.

RESEARCH ASST. - MACHINE LEARNING | UNIVERSITY OF TEXAS
Fall 2017 - Spring 2019 | Austin, TX

- Develop novel algorithms for data recovery with neural networks in PyTorch
  - Invited talk, UC-Berkeley's Computational Imaging Group, 2019
  - [Project GitHub]. [Manuscript]. Med-NeurIPS, ISMRM publications.
- Devised novel regularization techniques to enforce fair model decisions

RESEARCH INTERN | QBE DIGITAL INNOVATION LAB
Spring/Summer 2017 | Madison, WI

- Formulated and executed rapid lifecycle experiments from business objectives
- Built data pipelines and detection algorithms for satellite imaging projects
- Designed and tested firmware/hardware for interactive 15 ft. LED pixel display

ELECTRICAL ENGR. + PROJECT MGMT. INTERN | BOEING
Summer 2016 | Seattle, WA

- Designed power distribution systems in CAD according to project requirements
- Developed a plan (later implemented) for energy management to save $2.8M/yr

LEADERSHIP EXPERIENCE

PRESIDENT, CO-FOUNDER | BADGERLOOP INC.
Fall 2015 - Spring 2017 | Madison, WI

- Won Innovation Award + 3rd place at the SpaceX Hyperloop Pod Competition
- Created and led organization for 150 multi-disciplinary students
- Oversaw design, build, and integration across all sub-teams
- Raised $250,000+ monetary/material support from industry and VC firms
- Negotiated legal contracts w.r.t. intellectual property and corporate sponsorship
- Created and instructed a hyperloop special topics course for 40 students

AQUATICS SUPERVISOR | CITY OF MADISON
2014 - 2015 | Madison, WI

- Hired, trained, and supervised 100+ employees; managed budget of $250,000
- Led organization that provided swim team opportunities to underprivileged youth