Jacquelyn Schmidt

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SUMMARY

I am a 5th year PhD candidate at the University of Michigan focused on developing sensor-based control systems and machine learning/AI methods to address challenges in urban stormwater infrastructure. I have 8 years of technical research experience, including 3 years working closely with water utilities and NGOs. Strong in analyzing multi-system problems, communicating complex ideas to diverse audiences, as well as overcoming technical and operational challenges, I am looking to apply these skills in my next opportunity.

EXPERIENCE

DIGITAL WATER LAB @ UNIVERSITY OF MICHIGAN, Ann Arbor, Michigan, USA **Aug 2019 - present**

Graduate Research Assistant, University of Michigan

- Developed full-stack technologies for urban stormwater management (IoT sensors, machine learning/AI, data analysis pipelines, web applications, data visualization).
- Identified smart water technology adoption barriers through interviews with water utility control room operators and green infrastructure developers in the metro Detroit area.
- Managed server infrastructure (AWS) and software back-end (Python, Bash, Unix) for a 250,000 km^2, 160+ node IoT water sensor network.
- Supervised tasks, research agendas, and work output for 5 undergraduates, 2 master's students and 3 lab technicians.

SENSOR, SIGNAL & INFORMATION PROCESSING CENTER, Tempe, Arizona, USA **May 2018 - Aug 2018**

Research Intern, Arizona State University

- Worked with a team of 7 researchers to develop a low-power, renewable energy-charged illuminated buoy to reduce accidental wildlife catchment in fishing nets.

LORENZ QUANTUM COMPUTING RESEARCH GROUP, Urbana, Illinois, USA **May 2016 - Aug 2017**

Undergraduate Research Assistant, University of Illinois at Urbana-Champaign

- Prototyped components for table-top experiments with the goal of developing an optical quantum memory device.

EDUCATION

UNIVERSITY OF MICHIGAN, Ann Arbor, Michigan, USA **Aug 2019 - May 2024**

PhD Intelligent Systems, *Water / Civil Engineering*
MSE Electrical Engineering, *Signal & Image Processing and Machine Learning*
MSE Civil Engineering, *Intelligent Systems*

UNIVERSITY OF ILLINOIS, Urbana-Champaign, Illinois, USA **Aug 2015 - May 2019**

BS Engineering Physics, *Minors: Electrical Engineering, Informatics (Data Science), Geography*

SKILLS

Programming *Proficient:* Python, LaTeX, Shell/Bash *Familiar:* Javascript, HTML/CSS, MATLAB, Julia, Java

Libraries/Frameworks *Proficient:* Numpy, Scikit-Learn, Pandas, Flask, PySWMM *Familiar:* React

Tools/Platforms *Proficient:* Unix/Linux, Git, AWS, Adobe Creative Cloud, Microsoft Office *Familiar:* ArcGIS, Docker

Languages English (*Business Professional*), Mandarin (*Conversational - B1 / HSK 4*)

PUBLICATIONS

- Measuring city-scale green infrastructure drawdown dynamics using internet-connected sensors in Detroit (October 2023), *Environmental Science: Water Research & Technology*, DOI: 10.1039/D3EW00098B
- Machine Learning-Assisted, Process-Based Quality Control for Detecting Compromised Environmental Sensors (August 2023), *Environmental Science and Technology*, DOI: 10.1021/acs.est.3c00360
- Climate Resiliency Through Data: Managing Stormwater Sewers in Detroit (April 2022), *CHI Conference on Human Factors in Computing Systems Extended Abstracts*, DOI: 10.1145/3491101.3516804