

# ABHIRAM MULLAPUDI

*Curriculum vitae* (November 17, 2024)

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## POSITIONS

- 2023– **Senior Data Scientist** at Xylem
- **Timeseries forecasting & Anomaly Detection:** Developed an internal service for
  - **MLOps:**
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- 2020–2023 **Hydraulic Control and Optimization Engineer** at Xylem
- Timeseries forecasting: Developed a one-dimensional convolutional neural network for predicting 24 hours flows at the treatment plant in near-real time.
  - Timeseries filtering: Developed a one-dimensional convolution neural network model for filtering and interpolating timeseries spatio-temporally.
  - Simulation of stormwater systems: Developed an extension for EPA-SWMM to identify travel-times and extended EPA-SWMM to assimilate sensor data into simulation by dynamically updating swmm files.
  - Real-time applications: - Developed a real-time timeseries processing module for filtering sensor data streams, applying arbitrary equations using symbolic programming, and detect anomalous behaviour in water networks using

## EDUCATION

- 2017–2020 **Ph.D.** in Civil Engineering at University of Michigan, Ann Arbor, USA  
*Statistical Learning Approaches for the Control of Stormwater Systems*; Advisor: Branko Kerkez
- 2015–2017 **M.Sc.Eng.** in Civil Engineering at University of Michigan, Ann Arbor, USA
- 2011–2015 **B.Tech** in Civil Engineering at Amrita Vishwa Vidyapeetham, Coimbatore, India

## PUBLICATIONS

- 2023 Abhiram Mullapudi and Branko Kerkez. Bayesian optimization for shaping the response of stormwater networks.
- 2023 Sara P. Rimer, Abhiram Mullapudi, Sara C. Troutman, Gregory Ewing, Jeffrey M. Sadler, Jonathan L. Goodall, Ruben Kertesz, Jon M. Hathaway, and Branko Kerkez. pystorms: a simulation sandbox for the design and evaluation of stormwater control algorithms. *Environmental Modelling and Software*, 2023

## HONOURS

- 2018 Winner of LIFT challenge

## SKILLS

## PROFESSIONAL SERVICE

- Vice-chair of Emerging and Innovative Technologies subcommittee for American Society of Civil Engineering's Environmental and Water Research Congress.
- Part of the organizing committee at 2024 NURAL-IPS Gaussian Processes workshop

## JOURNAL REVIEW

- *HardwareX*
- *IEEE-CDC 2020*
- *Journal of Hydrology*
- *Water Resources Research*
- *Journal of Hydroinformatics*
- *Water Science and Technology*
- *Journal of Open Source Software*
- *Journal of Computing in Civil Engineering*
- *Journal of Irrigation and Drainage Engineering*
- *Journal of Water Resources Planning and Management*
- *Environmental Science: Water Research & Technology*

## CONFERENCE

## ABOUT THIS TEMPLATE

This document is modelled after the style of [my](#) own CV, which you can find [here](#). It was originally inspired by the CV of [Dario Taraborelli](#), but has since somewhat evolved—or so I like to tell myself—from the original template.

This document does not offer many special features, except for the `\years` macro, which can be used to typeset small notes in the margin of the document. I use them to indicate *durations*, but you could also repurpose it to have small annotations in the style of Edward Tufte. In addition, the template uses two special fonts for sans-serif typesetting and monospace typesetting. I do not tend to use the former for many things, but you might like it for typesetting the titles of publications. The latter font type, though, I often use in order to describe software projects or packages, such as `PyTorch` or `scikit-learn`.

That's all there is to it—enjoy the template & feel free to open tickets for comments or feedback.