

Kalvik Jakkala

Machine learning PhD Student,
University of North Carolina at
Charlotte

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🔗 <https://kdkalvik.github.io/>

🐙 <https://github.com/kdkalvik>

in <https://linkedin.com/in/kalvik>

Research interests

- Gaussian Processes
- Bayesian Learning
- Deep learning
- Informative path planning and sensor placement

Education

PhD in Computer Science

University of North Carolina at
Charlotte

Advised by: Professor Srinivas Akella

MSc in Computer Science

University of North Carolina at
Charlotte

Concentration in AI, Robotics, and
Gaming

GPA: 4.00

BSc in Computer Science

Wichita State University

Minor in Mathematics

GPA: 3.45

Activities/Awards

Dean's Honor Roll

May 2018, May 2017, Dec 2016, Dec
2014

*Recognized for outstanding academic
performance by the Dean's office*

Vice President, Association for Computing Machinery (ACM)

Aug 2015—Dec 2016

*Managed the local chapter of ACM and
organized educational events on
campus*

Vice President, Institute of Electrical and Electronics Engineering (IEEE)

Aug 2015—Dec 2016

*Managed the local chapter of IEEE and
organized educational events on
campus*

Skills

Linux, AWS, Microsoft Azure, GCP,
Slurm, Python, C/C++, Matlab, SQL,
Bash Scripting, Tensorflow, PyTorch,
OpenCV, ROS, SciPy, Pandas, Open
MPI, Numpy, Pyro, PyMC3, GPflow

Publications

Kalvik Jakkala and Srinivas Akella.

Bayesian Sensor Placement for Multi-source Localization of Viruses in Wastewater Networks.

Manuscript submitted for publication, 2022.

Kalvik Jakkala and Srinivas Akella.

Probabilistic Gas Leak Rate Estimation using Submodular Function Maximization with Routing Constraints.

*IEEE Robotics and Automation Letters (RA-L), IEEE International
Conference on Robotics and Automation (ICRA), 2022.*

Kalvik Jakkala.

Deep Gaussian Processes: A Survey.

arXiv, 2021.

Kalvik Jakkala, Chen Chen, Minwoo Lee, Arupjyoti Bhuyan, Zhi Sun,
and Pu Wang.

Spatio-Temporal Domain Adaptation for Gait Based User Recognition from Radar Data.

Preprint, 2020.

Prabhu Janakaraj, Kalvik Jakkala, Arupjyoti Bhuyan, Zhi Sun, Pu
Wang, and Minwoo Lee.

STAR: Simultaneous Tracking and Recognition Through Millimeter Waves and Deep Learning.

12th IFIP Wireless and Mobile Networking Conference (WMNC), 2019.

Kalvik Jakkala, Arupjyoti Bhuyan, Zhi Sun, and Pu Wang.

Deep CSI Learning for Gait Recognition At-Scale.

*Third International Balkan Conference on Communications and Networking
(BalkanCom), 2019.*

Akarsh Pokkunuru, Kalvik Jakkala, Arupjyoti Bhuyan, Pu Wang, and
Zhi Sun.

NeuralWave:Gait-based User Identification through Commodity WiFi and Deep Learning.

*Proc. of 44th Annual Conference of the IEEE Industrial Electronics Society
(IECON), 2018.*

Research

Pose Estimation and Action Recognition with mmWave Radar Devices

May 2019—May 2020

Analysed and developed deep learning algorithms for pose estimation and
action recognition from 76-80 GHz band devices

Real-time Depth Estimation from Monocular Images

Jan 2017—Dec 2017

Studied and deployed deep learning methods for real-time depth estimation
from monocular images in autonomous underwater and aerial drones

Autonomous Underwater Vehicle (Team-Leader)

May 2016—May 2018

Designed, built, programmed, and tested a complete 6DOF capable
underwater vehicle from scratch (Nvidia Jetson SoC)

Autonomous Indoor Environment Mapping Drone (Team)

Aug 2015—May 2016

Worked on path planning and object avoidance algorithms for a quad-copter
capable of indoor environment mapping (Pixhawk, Raspberry Pi SoC)

Teaching

Teaching Assistant

- Graduate Machine Learning course
- Graduate Algorithms & Data Structures course
- Undergraduate Object-oriented Programming course
- Undergraduate Data structures course
- Undergraduate Introductory C++ programming course