Swapnil S. Shinde
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Personal Info.

Date of Birth:
29^{th}, *October*, 1991

Nationality:
⇒ India

Language Proficiency:
- English- Fluent
- Italian - Basics

Skills

Programming

- Matlab ●●●●●
- Simulink ●●●●○
- Java ●●●●○
- C & C++ ●●●●○
- Python ●●●○○
- RSCAD ●●●●○
- LabView ●●●○○

Swapnil Sadashiv Shinde (PhD Student @ Unibo)

About me At present, I am working as a Ph.D. student at the University of Bologna. My thesis work is mainly related to the integration of machine learning techniques into the vehicular network for solving complex vehicular problems.

Education

Nov. 2020 - Present, University of Bologna, Italy
Ph.D Student in Automotive for Intelligent Mobility,
Oct. 2017 - March 2020, University of Bologna, Italy
MS in Telecommunication Engineering, (103/110)
Sept. 2013- June 2015, IIITD&M Kancheepuram (Chennai), India
M.Des. in Communication Systems, (GPA- 7.57/10)
Oct. 2009- June 2013, VPCOE Baramati (Pune Uni.), India
B.E. in Electronics and Telecommunications, (GPA- 3.2/4)

Experience

Nov. 2015 - Oct. 2017,
Project Engineer, IIT Kanpur, India

Jul. 2013 - Jun. 2015,
Teaching Assistantship, IIITD&M, Kancheepuram, India
- Teaching assistant for Electronics Engineering (B.Tech , 3^{rd} year) in **Electronics Instrumentation Practice Lab**. (Aug-Dec, 2013).
- Teaching assistant for Mechanical Engineering (B.Tech, 2^{nd} year) in **Control Engineering Practice Lab**. (Jan-May, 2014).
- Teaching assistant for Electronics Engineering (B.Tech, 2^{nd} year) in **Applied DSP Practice Lab**. (Aug-Dec, 2014)
- Teaching assistant for Electronics Engineering (B.Tech, 2^{nd} year) in **Networks and Systems Practice Lab**. (Aug-Dec, 2014)
- Teaching assistant for (B.Tech 1^{st} year) in **Measurement and Data Analysis Practice Lab**. (Jan-May, 2015)

Projects

PhD Thesis, (Nov. 2021 - present)
Thesis Advisor - Dr. Daniele Tarchi, Associate Professor @Unibo
- Connected Vehicles for Beyond 5G Scenarios.

M.S. Thesis, (Oct. 2019 - March 2020)
Thesis Advisor - Dr. Daniele Tarchi, Associate Professor @Unibo
- Radio Access Network Function Placement Algorithms in an Edge Computing Enabled C-RAN with Heterogenous Slices Demands.

Project, IITK, (Nov. 2015 - Aug. 2017)
P. I. - Dr. Ketan Rajawat, Associate Professor @IITK
- Demand side management in the smart grid.
- Wide Area State Estimation Under Communication Delays and Losses.

M.Des. Thesis, (July 2014 - June 2015)
Thesis Advisor - Dr. Priyanka Kokil, Assistant Professor @IIITD&M
- Stability Analysis of Direct-Form Digital Filters in the Presence of Nonlinearities and External Disturbance.
- Mathematical Modeling of Cellular Network in Campus.

B.E. Thesis, (Aug. 2012 - March 2013)
- Vehicle Tracking System Using GSM and GPS.

Publications

- Shinde S. S., Bozorgchenani A., Tarchi, D.,Quing N.“ On the Design of Federated Learning in Latency and Energy Constrained Computation Offloading Operations in Vehicular Edge Computing Systems.”Submitted to IEEE Transactions on Vehicular Technology, 2021.
- Shinde S. S., Marabissi D. , and Tarchi D. , “A Network Operator-biased approach for Multi-Service Network Function Placement in a 5G Network Slicing Architecture.” Submitted to the Computer Networks, Elsevier, 2021.
- Mohammed I.,Geetha S. J., Shinde S. S., Rajawat K., Chakrabarti S., “Modified Re-iterated Kalman Filter for Handling Delayed and Lost Measurements in Power System State Estimation.” IEEE Sensors Journal,(2019).
- Bedi A. S. , Ahmad Md W. , Shinde S. S., Rajawat K., Anand S., “Online algorithms for storage utilization under real-time pricing in smart grid.” International Journal of Electrical Power & Energy Systems, (2018).
- Kokil P., Shinde S.S., “A Note on the Induced l_∞ Stability of Fixed-Point Digital Filters Without Overflow Oscillations and Instability Due to Finite Wordlength Effects.” Circuits, Systems & Signal Processing Journal, (2016)
- Kokil P., Shinde S.S., “An Improved Criterion for Peak-to-peak Realization of Direct-Form Interfered Digital Filters Employing Saturation Nonlinearities.” The International Journal for Computation and Mathematics in Electrical and Electronic Engineering, (2015).
- Kokil P., Shinde S.S., “Asymptotic Stability of Fixed-point State-space Digital Filters with Saturation Arithmetic and External Disturbance: An IOSS Approach.” Circuits, Systems & Signal Processing Journal (2015).

Online Learning (Via Coursera and edX)

Coursera

- **Linear Circuits** offered by **Georgia Institute of Technology.**
- **Welcome to Game Theory** offered by The **University of Tokyo.**
- **Game Theory II: Advanced Applications** offered by **Stanford University and The University of British Columbia.**
- **Cryptography I** offered by **Stanford University.**
- **Image and video processing:** From Mars to Hollywood with a stop at the hospital offered by **Duke University.**
- **Hardware Security** offered by **University of Maryland.**
- **Usable Security** offered by **University of Maryland.**

edX

- **Applications of Linear Algebra Part 1** offered by **Davidson College**
- **Signals and Systems** offered by The **IIT Bombay**
- **ISSCCx: ISSCC Previews - Circuit and System Insights** offered by **online learning initiative of IEEE**
- **Solving Complex Problems** offered by **Delft University of Technology**

Awards

2020-2023, PhD Fellowship

- Recipient of three-year scholarship from University of Bologna for pursuing the PhD in Automotive for Intelligent Mobility(2020-2023),

2013-2015, Fellowship, Govt. of India

- Recipient of Institute financial assistance, during graduate study program under GATE-Scholarship scheme of Ministry of Human Resource Development (MHRD),

Achievements, IEEE

- Achieved **IEEE certificate** valid for 7 Professional Development Hours (PDHs) or .7 Continuing Education Units (CEUs) for Circuits and System Course.

Other Experience

Scientific Paper Reviewer:

- IEEE Transactions on Vehicular Technology,

Master thesis Co-Supervised students (@ Unibo):

- Supriya Adapa, Tensor Flow Federated Learning: Application to Decentralized Data, March 2021,
- Ahmad Ezzeddine, Performance Evaluation of Network Function Placement in NTN 5G Architectures, July 2021
- Krishna Chaitanya Annam, Lyapunov Optimization for SWIPT based Fog Network, in progress