PURDUE UNIVERSITY | College of Engineering

Multiple Positions Available | Purdue Digital Twin Lab

[Description] Dr. Ziran Wang is a Tenure-Track Assistant Professor at the Purdue University College of Engineering, part of the Autonomous and Connected Systems Initiative and the Lyles School of Civil Engineering. He leads the Purdue Digital Twin Lab, which aims to build digital replicas of real-world entities based on AI, big data, cloud/edge computing, and mixed reality. His lab is looking for multiple positions with flexible starting dates (summer/fall 2022 & spring/summer/fall 2023) and various levels (PhD/MS/BS students & remote-friendly interns). Research assistance funding and tuition waiver will be available based on the position level. Desirable candidates are expected to work on one of the following topics:

- [**Automated Driving Algorithm**] Develop machine learning-based algorithms for behavior prediction, decision making, motion planning, and/or motion control of automated vehicles
- [**Automated Driving System**] Design the full-stack automated driving system based on the automated vehicle platform of the Purdue Digital Twin Lab to test proposed algorithms
- [**Personalized Recommendation**] Propose recommender systems to learn and satisfy personalized preferences of mobility users based on big data
- [**Cloud/Edge Computing**] Build device-edge-cloud frameworks to deploy digital twins and provide services to physical entities
- [**Advanced Simulation**] Construct immersive simulations for digital twins and metaverse with game engines

[Requirements] Desirable candidate should either have or is currently pursuing a MS/BS degree in an engineering discipline, such as Electrical and Computer Engineering, Mechanical Engineering, Civil Engineering, Industrial Engineering, and Computer Science. Research experience in machine learning, data science, automated driving, robotics, and/or mixed reality is a plus. Interested candidates are encouraged to send resume/CV to ziran@purdue.edu with the email title "[*Position*] Application-[*Full Name*]".

[Background] Purdue University College of Engineering has been ranked No.4 in the U.S. for two consecutive years by U.S. News, right below MIT, Stanford, and Berkeley. Prior to joining Purdue, Dr. Wang worked for Toyota R&D in Silicon Valley as Principal Researcher of Digital Twin, leading a research team to build an AI-based data-driven vehicle-edge-cloud framework for future mobility services. He also serves as Founding Chair of IEEE Technical Committee on Internet of Things in Intelligent Transportation Systems, and Associate/Guest/Handling Editor of five academic journals. His achievements were demonstrated on Consumer Electronics Show (CES) in Las Vegas, and acknowledged by four best paper awards, the First Prize in IEEE Shape the Future of ITS Competition, and the U.S. Department of Transportation Dissertation Award. Dr. Wang is an author of 40+ refereed publications and 40+ U.S. patent applications. He received the Ph.D. degree in Mechanical Engineering from the University of California, Riverside, supervised by Dr. Matthew Barth from Electrical and Computer Engineering. More information: http://ziranw.github.io.

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