PURDUE UNIVERSITY | College of Engineering

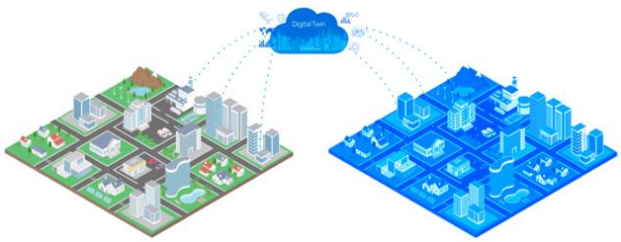
Multiple Positions Available | Purdue Digital Twin Lab

[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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招生信息 | 美国普渡大学数字孪生实验室

[简介] 王子然博士现于美国普渡大学工程学院任助理教授(终身教职轨、博士生导师)，同时隶属于该院的智能网联系统交叉学科研究组和土木工程系。他组建的普渡数字孪生实验室致力于运用人工智能、大数据、云计算、边缘计算、混合现实等技术，在虚拟世界中构建真实世界的数字映射。该实验室现招收多名博士生(含全额奖学金)、硕士生、本科实习生、远程实习生，从事下列研究：

- **[自动驾驶算法]** 开发基于机器学习的自动驾驶算法，包括行为预测、决策、运动规划、运动控制
- **[自动驾驶系统]** 基于实验室的自动驾驶汽车搭建全栈自动驾驶系统并测试相关算法
- **[个性化推荐算法]** 设计基于大数据的推荐系统用于学习并满足出行用户的个性化偏好
- **[云计算与边缘计算]** 在设备-边缘-云系统架构中部署数字孪生并为真实世界提供数字化服务
- **[混合现实仿真系统]** 基于游戏引擎为数字孪生与元宇宙搭建沉浸式的混合现实仿真系统

[要求] 申请人须已被授予、或正在攻读工程相关的硕士或本科学位，包括但不限于电子工程、自动化、机械工程、交通工程、软件工程、计算机科学。如有机器学习、数据科学、自动驾驶、机器人、混合现实等相关研究经历者可优先考虑。请将英文简历发送至王子然博士邮箱 ziran@purdue.edu，并在邮件标题注明申请职位与姓名 “[PhD/MS/Intern] Application-[*Full Name*]”。

[背景] 普渡大学工程学院在 2022 年与 2023 年 U.S. News 美国工程研究生院排名中连续两年位列第四，仅次于麻省理工大学、斯坦福大学和加州大学伯克利分校。该校现有 13 位诺贝尔奖得主、21 位美国工程院院士，杰出校友包括登月第一人尼尔·阿姆斯特朗、两弹元勋邓稼先、火箭专家梁思礼等。普渡大学坐落的印第安纳州西拉法叶市横跨沃巴什河，是个淳朴安静的大学城，距该州首府、全美第十二大城市印第安纳波利斯约一小时车程，距全美第三大城市芝加哥约两小时车程。

在加入普渡大学之前，王子然博士于丰田汽车硅谷实验室担任主任研究员，主管丰田北美的数字孪生研究。王子然博士在学术界有多项任职，包括担任电气电子工程师学会(IEEE)“智能交通系统中的物联网”技术委员会创始主席，在四个 IEEE、汽车工程师协会(SAE)技术委员会中担任委员，并在五本学术期刊中担任编委会委员。他的学术研究成果于拉斯维加斯举办的消费电子展(CES)中公开展出，在四项学术期刊与会议上获最佳论文奖，并被美国交通部授予最佳博士论文奖，被 IEEE 授予 “塑造智能交通未来” 大赛第一名。王子然博士在学术期刊与会议上发表著作四十余篇，并授权申请美国发明专利四十余项。他于加州大学河滨分校获机械工程博士学位，师从该校电子与计算机工程系讲席教授 Matthew Barth 博士。更多详情请参考个人网站：http://ziranw.github.io