Abstract

From Micromobility to Cars: Addressing the Missing Links in Multimodal Transportation

Shared multimodal transportation holds the greatest potential to alleviate traffic congestion and address the ever increasing demand for urban mobility. However, shorter-range modes that connect with bus and rail – shared cars, scooters, bikes, mopeds – are still uneconomical and inefficient for fleet operators to deploy. Through developments at the MIT Senseable City Lab and Superpedestrian, Assaf and his colleagues have developed new technologies driven by AI and machine learning to address these problems. Solutions, including autonomous maintenance and active safety systems for vehicles, advanced vehicle dispatch algorithms, and predictive management software, are designed to dramatically improve safety and reduce the cost of running shared vehicle services. These systems also provide cities with remote management software tools to sustainably integrate multiple modes of transportation into a seamless urban transit network.
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Assaf Biderman 是一位企业家、作家和技术发明家。他是Superpedestrian 公司的创始人及首席执行官。这家机器人公司主要开发小型电动汽车共享使用平台。Assaf 与Superpedestrian 公司团队一起开发了一系列具有自主维护功能和主动安全系统的踏板车、电动自行车及其他微型车辆。此类产品可实现更安全、更具成本效益的共享出行服务。此外，Assaf 还是麻省理工学院可感知城市实验室的副主任和创始成员。该实验室是一个开发大数据、机器学习和机器人技术的研究小组，旨在提高城市的宜居性。他负责监督城市传感、数据融合和城市交通领域的研究，同时领导实验室与城市和私营部门的各种合作伙伴关系计划。Assaf 拥有物理学和设计专业背景。他现有持有150多种专利及发表著作，并曾获得众多国际性奖项，包括红点之星奖、《时代》杂志奖、托马斯·爱迪生专利奖和詹姆斯·戴森设计奖等。

Assaf Biderman is an entrepreneur, author and technology inventor. He is the founder and CEO of Superpedestrian, a robotics company that develops platforms of small electric vehicles for shared use. Together with the team at Superpedestrian, Assaf has developed fleets of scooters, e-bikes and other micro-vehicles with autonomous maintenance capabilities and active safety systems that enable much safer and cost-effective shared mobility services. Assaf is also the associate director and founding member of the MIT Senseable City Lab, a research group which develops technologies in big data, machine learning and robotics aimed at improving liveability in cities. He has supervised research in areas of urban sensing, data fusion and urban transportation, and also leads lab partnership initiatives with cities and the private sector. Assaf has a background in physics and design. He holds over 150 patents and publications, and has been honoured with multiple international awards including the Red Dot Luminary, Time Magazine, Thomas Edison and James Dyson awards.