

Ziyi Ma, EIT

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EDUCATION

New York University, Tandon School of Engineering, Brooklyn, NY

- Master of Science in Transportation Planning and Engineering, **GPA 3.8** May 2020
 - Honors: Dwight David Eisenhower Transportation Fellow, 2019 ITRA Microtransit Hackathon Winner
- Bachelor of Science in Civil Engineering, minor in Transportation, **GPA 3.4** May 2019
 - Honors: Chi Epsilon, Nick Russo Award, SAME Joe Markle Dinner Memorial #2 Scholarship, Dean's List

PROFESSIONAL EXPERIENCE

NYU Tandon School of Engineering, Brooklyn, NY

Jun 2016-Jun 2020

Research Assistant and Teaching Assistant

- Created an agent-based simulation model on MATSim featuring a synthetic population representing eight-million NYC residents and a calibrated time-variant multi-model network
- Lead a USDOT funded research project on creating a simulation-based optimization framework for bus frequency planning in a large-scale transportation network
- Evaluated the Brooklyn redesign network and found a 20% increase in ridership but also a 25% reduction in operating cost
- Published three peer-reviewed journal papers, presented research findings twice at TRB

Philip Habib & Associates, New York, NY

Sep 2019-Dec 2019

Transportation Engineering Intern

- Built the existing, no-action, and with-action Synchro models consisting 64 intersections for the Bushwick rezoning project
- Designed pedestrian infrastructure elements, such as sidewalks, staircases, and subway turnstiles for the Hudson Yard Redevelopment project to meet future demand
- Automated transit demand analysis with Python and Google MAP API to route trips between each origin and destination

Jacobs Engineering Group, New York, NY

May 2017-Aug 2017

Traffic Engineering Intern

- Analyzed traffic volume counts and made recommendations to increase the roadway capacity around JFK
- Used VISSIM and Excel Macro to simulate and recommend temporary routing and detours of traffic on the George Washington Bridge and the Bayonne Bridge

AKRF Inc, New York, NY

Oct 2016-Feb 2017

Transportation Planning Intern

- Conducted surveys at hotels in New York City's as part of the NYCDOT/NYMTC travel pattern survey
- Performed field works, including car counting at intersections and tour bus customers queue counting

EXTRACURRICULAR

ASCE/AISC Steel Bridge Design Team

Oct 2015-Jun 2018

Captain of Design

- Placed first in regional level competition twice, representing NYU in national competition first time in history
- Designed and modeled bridges and connections on Inventor for fast assembly and proper force transfer
- Organized CNC orders of the bridge connections for a competitive price and adequate quality controls

OTHER QUALIFICATIONS

- Proprietary Software: Esri ArcGIS, AutoCAD, HCS, Synchro, Microsoft office suite (VBA), MATLAB, Tableau
- Open Source Software: Python, R-Studio, SQL, MATSim, SUMO

PUBLICATIONS

- He, Y., Zhou, J., **Ma, Z.**, Chow, J.Y.J*, Ozbay K., et al (2020). Evaluation of city-scale built environment policies in New York City using an emerging mobility-accessible synthetic population
- Ma, T-Y.*, Chow, J. Y. J., Klein, S., & **Ma, Z.** (2020). A user-operator assignment game with heterogeneous user groups for empirical evaluation of a microtransit service in Luxembourg. *Transportmetrica A: Transport Science*, 1-28.
- **Ma, Z.**, Urbanek, M., Pardo, M.A., Chow, J.Y.J.*, Lai, X. (2017). Spatial welfare effects of shared taxi operating policies for first mile airport access, *International Journal of Transportation Science and Technology* 6(4), 301-315.