Yun Chen

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Education

- **The University of Texas at Austin**
  M.S., Electrical and Computer Engineering (GPA: 3.94/4.0) *May. 2023*
  - **Core Courses:** Large Scale Optimization, Wireless Communications Lab, Digital Image Processing, Game Theory, Block-chain Technologies, Combinations and Graph Theory, Reinforcement Learning.

Publications

- **Y. Chen**, X. Lin, T. Khan, M. Mozaffari, "Efficient Drone Mobility Support Using Reinforcement Learning", in *2020 IEEE Wireless Communications and Networking Conference (IEEE WCNC 2020)*, submitted.
- **Y. Chen**, W. Yan, C. Li, Y. Huang, and L. Yang, "Personalized Optimal Bicycle Trip Planning Based on Q-learning Algorithm", in *2018 IEEE Wireless Communications and Networking Conference (IEEE WCNC 2018)*, Barcelona, Spain, Apr. 2018.
- Y. Wang, **Y. Chen**, H. Dai, Y. Huang, and L. Yang, "A Learning-Based Approach for Proactive Caching in Wireless Communication Networks", in *The Ninth International Conference on Wireless Communications and Signal Processing*, Nanjing, China, Oct. 2017.

Academic Research and Projects

- **Smooth UAV Navigation without Collision** Austin, TX
  Advisor - Prof. Robert Heath *Feb. 2019 - present*
  - Predict steering angles and collision probabilities for collision avoidance.
  - Velocity control for smooth flying using Deep Recurrent Q-Network (DRQN).
  - Realize drone navigation in both simulations and real-world tests.
- **Personalized Bicycle Trip Planning Based on Q-learning Algorithm** Nanjing, China
  Excellent (Top 10) Graduation Project in SEU, Advisor - Prof. Luxi Yang *Mar. 2017 - Jun. 2017*
  - Evaluated user preferences by predicting popularity of point of interest using Echo State Network.
  - Generated overall optimal bicycle trips with the Q-learning algorithm.
  - Proposed a novel algorithm for route augmentation while maintaining overall optimality.
- **A Learning-Based Approach for Proactive Caching in Wireless Networks** Nanjing, China
  Advisor - Prof. Luxi Yang *Mar. 2017 - Jun. 2017*
  - Estimated content popularity for caching by creating a novel regularized singular value decomposition (RSVD) and transfer learning (TL) based approach.
  - Maximized caching efficiency of small-cell base stations by designing an iterative algorithm.

Work Experience

- **Research Intern for Drone Mobility Support** Santa Clara, CA
  Ericsson Inc. *Jun. 2019 - Aug. 2019*
  - Developed RL based handover decision scheme for drones.
- **Teaching Assistant of *Probability and Random Process*** Austin, TX
  Dept. of Electrical and Computer Engineering, UT Austin *Jan. 2019 - May. 2019*
- **Image Processing Intern** Nanjing, China
  China Network Valley (CNV) *Apr. 2016 - Jul. 2016*
  - Improved Camshift algorithm by automating the process to perfect multi-objective target tracking.
  - Refined dynamic gesture recognition by training cascade classifiers with the Adaboost algorithm.
  - Facilitated body gesture recognition by analyzing horizontal and vertical histograms.

Professional Skills

- **Computer Skills**:
  - Language: Python, C++, Matlab, Java
  - Framework: Tensorflow, Pytorch, OpenCV
- **Language**: English (fluent), Mandarin (native)