Yun Chen

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Education

- **The University of Texas at Austin**
  PhD, Electrical and Computer Engineering (GPA: 3.95/4.0) *May. 2023*
  - **Core Courses:** Large Scale Optimization, Wireless Communications Lab, Digital Image Processing, Game Theory, Block-chain Technologies, Graph Theory, Reinforcement Learning, Data Mining, Digital Video.

Publications

- **Y. Chen**, N. Gonzalez-Prelcic, RW. Heath, "Collision-free UAV Navigation With a Monocular Camera Using Deep Reinforcement Learning", in *2020 IEEE International Workshop on Machine Learning for Signal Processing*, Espoo, Finland, Sep. 2020.
- [Best Paper Award] **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)*, Seoul, South Korea, May. 2020.
- **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

- **Video Assisted UAV Ego-movement Tracking** Austin, TX
  Advisor - Prof. Alan Bovik *Feb. 2020 - May. 2020*
  - Address the self localization problem of UAVs using video inputs.
  - Estimate movements of other objects that present in the video in scenarios like automated driving and flying.
- **Smooth UAV Navigation without Collision** Austin, TX
  Advisor - Prof. Robert Heath *Feb. 2019 - Feb. 2020*
  - Make a drone fly smoothly without collisions using object detection and Reinforcement Learning.
  - Realize drone navigation in both simulations and real-world tests based on ROS platform.
- **Monocular Camera Based Fitness Motion Correction** Austin, TX
  Advisor - Prof. Alan Bovik *Oct. 2018 - Dec. 2018*
  - Bone recognition based on OpenPose framework.
  - Performed 2D to 3D image transformation to get joint angles of human bodies.
  - Realized correction of fitness motions (plank, squats, etc.) by analysing skeleton positions and joint angles.
- **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.

Work Experience

- **Research Intern for A2G Communication Optimization** Austin, TX
  Ericsson Inc. *Jun. 2020 - present*
- **Graduate Research Assistant** Austin, TX
  WNCG, ECE, UT Austin *Sep. 2019 - May. 2020*
- **Research Intern for Drone Mobility Support** Santa Clara, CA
  Ericsson Inc. *Jun. 2019 - Aug. 2019*
- **Teaching Assistant of *Probability and Random Process*** Austin, TX
  ECE, UT Austin *Jan. 2019 - May. 2019*
- **Image Processing Intern** Nanjing, China
  China Network Valley (CNV) *Apr. 2016 - Jul. 2016*

Professional Skills

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