Yun Chen

Email : yunchen@utexas.edu   Mobile : 512-206-6918

EDUCATION

- **The University of Texas at Austin**
  PhD, Electrical and Computer Engineering (GPA: 3.95/4.0)   *Aug. 2018 - present*
  - **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**, X. Lin, T. Khan, M. Mozaffari, "A Deep Learning Approach to Efficient Drone Mobility Support", in *The 2nd Workshop on Drone Assisted Wireless Communications for 5G and Beyond - co-located with ACM MobiCom 2020 (DroneCom 2020)*, London, United Kingdom, Sep. 2020.
- **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**] **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*
  - Analysed pixel transformations in image sequences for visual odometry.
  - Trained a DNN to predict pixel location and depth of sequential images using unsupervised learning.
  - Predicted 6-DOF ego-motion for a UAV based on the video inputs from the on-board monocular camera.
- **Collision-free UAV Navigation with a Monocular Camera Using DRL**   Austin, TX
  Advisor - Prof. Robert Heath   *Feb. 2019 - Feb. 2020*
  - Proposed a UAV navigation system based on object detection and deep reinforcement learning (DRL).
  - Reduced the flight time and distance and avoided unnecessary turns for the UAV.
  - Alleviated wrong predictions from the deep networks by combining object detection.
- **Monocular Camera Based Fitness Motion Correction**   Austin, TX
  Advisor - Prof. Alan Bovik   *Oct. 2018 - Dec. 2018*
  - Realized bone and joint 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 Deep Learning Based 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 Using Rinforcement Learning**   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*

PROFESSIONAL SKILLS

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