

Alexander L. Witt
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EDUCATION

The University of Texas at Austin

Bachelor of Science, Computational Engineering with Honors

- GPA: 3.93 / 4.00
- Member of Tau Beta Pi Engineering Honor Society - 3 years
- American Electric Power Educational Scholarship - 3 years
- UT Endowed Presidential Scholarship - 3 years

EXPERIENCE

TerraClear

Bellevue, WA

Intern and Part-Time Machine Learning Engineer

May 2019 – present

- Developing deep learning models for high performance computer vision applications on Jetson Xavier for small object detection. Increased model performance by 1% by switching attention module to ECA.
- Improved aerial survey accuracy by developing algorithms to estimate homography using Siamese feature extracting networks.
- Standardizing deployment of software using Docker and continuous deployment pipelines.
- Devising autonomous data drift recognition capabilities by comparing a model's extracted features on training data and new input data.

University of Texas at Austin

Austin, TX

Research Assistant in Human Centered Robotics Laboratory

August 2020 – present

- Explored real-time multi-object tracking algorithms for busy scenes.
- Combining NLP and CNN models to improve action recognition in videos.

Unmanned Autonomous Vehicle Association

Austin, TX

Lead of Image Recognition Team

May 2018 – present

- Converted image recognition pipeline to use object detection, allowing for classification and localization of multiple targets in aerial images.
- Managed a team of 8 developers to optimize fully autonomous inferencing pipeline to process 4K resolution images in under one second on a Jetson Xavier.
- Conducted applied research to determine most performant methods of synthetic data generation.

Longhorn Rocketry Association

Austin, TX

Member of Flight Systems Team

August 2018 – July 2019

- Developed a rocket flight simulator for high Mach speed with NASA Trick, MATLAB, and C++.
- Used Monte Carlo to provide range of uncertainty during flight, assisting design and launch parameters.

University of Texas at Austin

Austin, TX

Research Assistant in Biomechanics Laboratory

May 2018 – January 2019

- Created FEM mouse skin model and reverse engineered a constitutive model in MATLAB and FEBio.

SKILLS

- Proficient in Python, C++, Docker, PyTorch, Convolutional Neural Networks, CI and CD.
- Knowledgeable with Bazel, Google Cloud, AWS services.