Samuel Todd Flanagan

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OBJECTIVE **Seeking employment in artificial intelligence, data science, high-performance computing, or related fields**

EDUCATION

Texas A&M University | College Station, TX

MS | Computer Engineering
Research | Autonomous Vehicle Localization
GPA | 3.857
May 2021

BS | Electrical Engineering
Minors | Computer Science, Mathematics
GPA | 4.0
May 2018

EXPERIENCE

Applied Research Laboratories | Austin, TX — Apr. 2021 – Present
Engineering Scientist Associate (TS Clearance)

- Developed a deep learning ensemble framework with comparative metrics and model visualization
- Wrote a heap-based move median algorithm in CUDA C++, 400X speed up over original code
- Created a custom implementation of Score-CAM, an open-source model visualization package
- Advised team in machine learning capabilities, deficiencies, and underlying mathematics

Texas A&M University | College Station, TX — Jan. 2019 – Jan. 2021
Research Assistant (Spring 2019), Graduate Student Worker

- Proposed novel improvements to localization algorithms
- Developed a noise model for image acquisition in autonomous vehicles
- Wrote numerical simulations in Python to evaluate algorithmic improvements

Tanknology Inc. | Austin, TX — July – Nov. 2018
Product Development Engineer

- Developed audio-based leak detection software for the VacuTect® system
- Built a Universal Windows Platform application in C#

United States Department of Defense — May – Aug. 2017
Splunk Developer (TS SCI Clearance)

- Promoted data-driven decision making through the creation of effective Splunk dashboards
- Created multiple CSS files allowing developers to quickly improve dashboard design

musx | Austin, TX — June – Aug. 2016
Product Development Intern

- Learned cross-platform mobile development in JavaScript using React Native

L-3 Communications | Greenville, TX — May – Dec. 2015
Electrical Engineering Co-op (S Clearance)

- Designed, fabricated, and installed instrumentation testing systems
- Contributed to electrical design of aerospace mission systems

National Instruments | Austin, TX — June – Aug. 2014
Test Engineering Intern

- Updated production testing software for three adapter modules

SKILLS

Python **CUDA** **Keras/Tensorflow** **Numba** **C/C++** **Linux**
Neural Network Visualization **Parallel Computing** **Signal Processing** **Vector Space Methods**

RESEARCH

Signal Processing Improvements to Localization for Autonomous Vehicles — Master's Thesis
Samuel Todd Flanagan

- Applied signal processing techniques to improve localization, especially in harsh conditions
- Supported by Ford Autonomous Vehicles LLC

Enhanced Normalized Mutual Information for Localization in Noisy Environments — IEEE ASPCON 2020
S. T. Flanagan, D. K. Khublani, J.-F. Chamberland, S. Agarwal, A. Vora

Localization in Autonomous Vehicles Using a Generalized Inner Product — IEEE GlobalSIP 2019
S. T. Flanagan, D. K. Khublani, J.-F. Chamberland, S. Agarwal, A. Vora