



# Ross Alexander

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## EDUCATION

### Stanford University

|  |          |               |
|--|----------|---------------|
| Ph.D. in Aeronautics & Astronautics, Artificial Intelligence Track | GPA: 4.1 | Not Completed |
| M.S. in Aeronautics & Astronautics, Artificial Intelligence Track  | GPA: 4.1 | June 2021     |

### Texas A&M University

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|---------------------------------------|----------|----------|
| B.S. in Aerospace Engineering, Honors | GPA: 4.0 | May 2019 |
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## SKILLS

- *Languages:* Python, Julia, MATLAB, C++, SQL, HTML/CSS
- *Libraries:* PyTorch, Tensorflow, Scikit-Learn, PySpark, POMDPs.jl

## EXPERIENCE

### Stanford Intelligent Systems Lab (SISL) | Stanford University

February 2020 – September 2021

#### Autonomous Driving Research

- Planning under uncertainty for autonomous driving in urban scenarios with smart infrastructure
- Developed and implemented novel sensor- and decision-fusion algorithm enabling tractable planning that achieves 0% collision rate in high-risk occluded pedestrian scenarios

#### COVID-19 Policy Research

- Adaptive control of spread of epidemics using graph-mined contact network models
- Developed end-to-end decision support tool utilizing modified Monte Carlo tree search (MCTS)

### Stanford Pre-Collegiate Studies (SPCS) | Stanford University

June 2020 – August 2021

#### Course Instructor

- Developed 80+ hours of undergraduate-level machine learning and data science curriculum
- Lead instructor for 7 two-week courses, taught 100+ students, avg. overall course ratings ~4.6/5.0

### CFD Research Corporation | Huntsville, Alabama

May 2019 – August 2019

#### Machine Learning Intern

- Researched, implemented, and trained deep Gaussian processes (deep GPs) for regression tasks
- Leveraged deep GPs in active learning tasks for ~20% increase in sample efficiency over shallow GPs
- Co-authored research proposals and helped secure contracts totaling \$500K+

## AWARDS & ACHIEVEMENTS

- *Stanford Graduate Fellowship in Science & Engineering:* Top fellowship for incoming STEM Ph.Ds.
- *Texas A&M University President's Endowed Scholar:* Top scholarship for incoming students
- *Charles Hoult Award for Modeling & Simulation:* 2017 recipient out of 83 college rocketry teams (IREC)
- *Eagle Scout:* Highest award in Scouting