Esther Robb

+ CONTACT

erobb@vt.edu
estherrobb.com

+ EDUCATION

2016-2019	**Virginia Tech**, Blacksburg VA Computer Engineering, B.S.	GPA: 3.71
2019-2021	**Virginia Tech**, Blacksburg VA Computer Engineering, M.S.	GPA: 3.66
Awards	Presidential Scholar, Dean's List, Bradley Fellowship Scholar, Google Summer of Code 2018	
Conferences	Presented at SuperDARN Workshop 2018, Presented at AGU 2018	
Courses	Deep Learning, Stochastic Signals and Systems, Computer Vision, Natural Language Processing, Data Analytics	

+ OBJECTIVE

Seeking an internship position in the field of Machine Learning and AI for Summer 2020.

+ EXPERIENCE

Student Researcher – Google Brain, San Francisco CA   *May 2020 – Aug 2020*
- Develop improved methods of inverse reinforcement learning.
- Worked independently guided by 3 full-time researchers from the TFAgents Brain team.

Student Researcher – Google Cerebra, Mountain View CA   *May 2019 – Dec 2019*
- Developed new methods of image editing and few-shot learning using generative models.
- Worked independently guided by 4 full-time researchers from the Cerebra and Brain teams.

Research Assistant – Computer Vision Lab at Virginia Tech, Blacksburg VA   *Jan 2019 – Present*
- Improved performance of few-shot learning algorithms by developing a generalized few-shot learning architecture cell using neural architecture search techniques.
- Improved performance on image reconstruction tasks by developing new decoder architectures using neural architecture search as part of a team of 3.

Research Assistant – Xin Group at Virginia Tech, Blacksburg VA   *Nov 2016 – Jan 2018*
- Created an interface to visualize chemical structures, search a catalyst database, and dynamically call a regression algorithm for discovering chemical catalysts.
- Worked independently supporting a team of chemical engineering graduate students.

Intern – Rincon Research Corporation, Chantilly, VA   *June 2017 - July 2017*
- Investigated hardware capabilities for high-precision GPS positioning on Android smartphones.
- Developed a Python toolkit to plot and analyze data obtained from the Android GNSS API.
- Led a team of 3 Computer Engineering interns in research direction and software design.

+ PERSONAL & CLASS PROJECTS

[NLP / Deep Learning] News summarizer - Generate a 1-page summary of 10,000 news articles.
[Machine learning] Mill failure prediction – Predict a rare event (0.6%) using a recurrent neural network.
[3D Modeling] Raytracer – Create reflections and shadows in 3D scene by tracing rays of light.

+ SKILLS

Programming	**Python, C/C++, Java, MATLAB, x86 Assembly, HTML/PHP/JS**
Tools	**TensorFlow, PyTorch, Keras, NumPy, Pandas, OpenGL**
Languages	English (native), Japanese (advanced), Mandarin (intermediate)