

Evan W. Becker

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EDUCATION:

University of California, Los Angeles (UCLA)	Expected 2025
Ph.D. in Computer Science	
GPA: 4.00/4.00	
University of Pittsburgh Swanson School of Engineering	2016-2020
Bachelor of Science in Electrical Engineering	

RESEARCH EXPERIENCE:

Graduate Researcher:	October 2020-Present
<i>Advisors- Alyson K. Fletcher & Sundeep Rangan, UCLA</i>	
<ul style="list-style-type: none">Analyzing the behavior of deep networks in high-dimensional regimes using the neural tangent kernel and message passing	
Undergraduate Research Assistant:	2018-2020
<i>Advisor- Natasha Miskov-Zivanov, University of Pittsburgh</i>	
<ul style="list-style-type: none">Developed and implemented algorithms (C++ and Python) for assembling graph-based causal networks to efficiently simulate dynamics of biological and geopolitical systemsAutomated translation of machine reading extractions from scientific papers	
International Genetically Engineered Machine Competition:	2018-2019
<i>Advisors- Alex Dieters & Natasha Miskov-Zivanov, University of Pittsburgh</i>	
<ul style="list-style-type: none">Utilized statistical filtering techniques (EKF, particle filter) to estimate biological rate constantsDesigned and simulated (ODE system) a genetic logic circuit implemented in bacteria	

PAPERS:

Becker, E., Bocan, K.N., Miskov-Zivanov, N. "Nested Event Representation for Automated Assembly of Cell Signaling Network Models". Proc. of the 10th Intl. Workshop on Static Analysis in Systems Biology (LNCS). Porto, Portugal. 2019

Miller, A., Burner, L., **Becker, E.**, Misra, R., Saba, A., and Berti, L. "A Novel UAV for Interaction with Moving Targets in an Indoor Environment". IARC Symposium on Indoor Flight Issues. 2018 [Link](#) (Not peer-reviewed; Awarded Best Technical Paper)

PRESENTATIONS:

Nested Event Representation for Cell Signaling Networks:	October 2019
<ul style="list-style-type: none"><i>Presentation: 10th International Workshop on Static Analysis in Systems Biology. Porto, Portugal</i>	
Tracktile: A Wearable Device for Deaf-blind Transcription:	December 2018
<ul style="list-style-type: none"><i>Poster: Swanson School of Engineering's Design Exposition. Pittsburgh, PA</i>	
Chronological Event Recording of Stimuli using CRISPR Base Editing:	October 2018
<ul style="list-style-type: none"><i>Presentation: iGEM 2018 Giant Jamboree. Boston, MA</i><i>Poster: 2018 Biomedical Engineering Society Annual Meeting. Atlanta, GA</i>	

HONORS/AWARDS:

NSF Graduate Research Fellowship -Honorable Mention	2020
University of Pittsburgh Stamps Scholarship (\$150,000+ in total):	2016- 2020
Swanson School of Engineering Summer Research Fellowship:	2019- 2020
Pitt Honors College Community Research Fellowship:	2018- 2019

TEACHING ASSISTANTSHIP:

Computer Science, UCLA

- Formal Languages and Automata Theory (CS 181)

Fall 2021

ECE, University of Pittsburgh

- Digital Circuits and Systems (ECE 0201)
- Embedded Processors and Interfacing (ECE 0202)

Fall 2019, Fall 2020

Spring 2020, Summer 2020

PROJECTS:

Senior Design Capstone:

August 2018 – December 2018

ECE, University of Pittsburgh

- Designed a wearable device to transcribe gestures from the deaf-blind alphabet (2nd place at Swanson School of Engineering Design Exposition)
- Filtered and fused time series and frequency data from IMU and electric field sensors into a useful feature vector that could be used to train our classification model

Autonomous Drone Team:

2016- 2018

University of Pittsburgh

- Utilized C++ and Python in a ROS framework to design and tune motion control system of an autonomous drone for the International Aerial Robotics Competition (1st place in US venue))

LEADERSHIP/SERVICE:

President of Robotics and Automation Society:

2019- 2020

University of Pittsburgh

Pittsburgh Data Jam Mentor:

2016- 2020

University of Pittsburgh & Pittsburgh Dataworks

TECHNICAL SKILLS:

Languages: Python (PyTorch, Tensorflow, Keras, CVXPY, OpenCV), MATLAB (CVX), C (CUDD), C++, ARM Assembly

Software/OS: Windows, Linux, ROS, Git, Solidworks, Eagle

GRADUATE WORKSHOPS AND SUMMER SCHOOLS:

- Deep Learning Theory, *Center for Statistics and ML, Princeton University* 2021
- Probabilistic AI, *Open AI Lab, Norwegian University of Science and Technology* 2021

GRADUATE COURSEWORK:

Machine Learning: Algorithmic ML, Large-Scale ML, Neural Networks and Deep Learning, Automated Reasoning Theory

Statistics: Applied Probability, Hierarchical Linear Models, High-Dimensional Statistics, Advanced Bayesian Computing

ECE: Convex Optimization, Information Theory, Linear System Theory, Image Processing

REFERENCES:

Alyson K. Fletcher

Assistant Professor of Statistics, Computer Science, & Electrical Engineering
University of California, Los Angeles

Sundee Rangan

Professor of Electrical & Computer Engineering
New York University

Natasa Miskov-Zivanov

Assistant Professor of Electrical & Computer Engineering, Bioengineering,
Computational & Systems Biology
University of Pittsburgh