

# ROHIT BANDARU

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## EDUCATION

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**Master of Engineering in Computer Science**, Cornell University  
**Bachelor of Science in Computer Science**, Cornell University  
Minor in Electrical and Computer Engineering

August 2018 - May 2019  
August 2015 - December 2018

PhD level courses: Computer Vision, Machine Learning Systems, Bayesian Machine Learning, Numerical Methods  
Other Courses: Machine Learning, Advanced Microcontroller Design, System Security, Signal Processing, Database Systems

## EXPERIENCE

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**Software Development Engineer II** SDE I: July 2019 - March 2021, SDE II: April 2021 - Present  
Amazon, Halo Tone Science Team (Health CV ML) *Seattle, WA*

- Develop a machine learning workflow to identify an enrolled speaker in streaming audio and provide emotion analysis, using Swift, Kotlin, Rust, CoreML, and Tensorflow
- Lead integration of models into the application and the evaluate performance in production and on annotated datasets
- Implement prototypes of new machine learning algorithms and features to provide new functionality and improve accuracy

**Software Development Engineer Intern** May 2018 - August 2018  
Amazon, Customer Service Applications *Seattle, WA*

- Developed a Spring MVC application for self-service configuration of customer feedback surveys, reducing engineering effort

**Graduate Teaching Assistant / Teaching Assistant** Aug 2017 - Dec 2017, Aug 2018 - May 2019  
Cornell Computing and Information Science *Ithaca, NY*

- Held office hours and developed coding assignments for Computer Vision, Machine Learning, and Database Systems courses

**Software Engineer** February 2017 - May 2018  
Cornell Autonomous Bicycle Team *Ithaca, NY*

- Led the computer vision localization project for the autonomous vehicle system to understand its location and surroundings using machine learning and odometry, using Nvidia Jetson TX1, Zed Stereo Camera/SDK, and ROS

**Business Lead** February 2016 - December 2018  
Cornell Genetically Engineered Machines Team (iGEM) *Ithaca, NY*

- Led the business/entrepreneurship subteam to win the 2017 Best Supporting Entrepreneurship iGEM special award over 300 international undergrad teams
- Cloned and tested two bacteriocin genes into bacterial plasmids to create a more effective treatment for bovine mastitis

## RESEARCH

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**Dynamically Adding and Removing Neurons** Developed novel iterative pruning algorithm to make neural networks more efficient on the MNIST and CIFAR datasets. [<link>](#)

**Domain Adaptation** Worked with Professors Bharath Hariharan and Kavita Bala to create a new dataset of different types of fashion images, and use various domain adaptation techniques to improve the performance of the FashionNet model

**Extending Graph Convolutional Networks to Edge Attributed Networks** Developed new architectures for graph convolutional networks (GCNs) to leverage node and edge based features. [<link>](#)

**Accurate Kernel Interpolation with Compactly Supported Kernels** Used compactly support kernels to make scalable KISS-GP Gaussian process framework more accurate and efficient. [<link>](#)

**Pancreatic Tumor Classification** Evaluated different deep learning architectures, including 3D CNNs, on the the classification of pancreatic tumors. [<link>](#)

**Seizure Detection** Used time series data and wavelet transform coefficients with dimensionality reduction on various machine learning models to achieve over 80% AUC on seizure detection using electroencephalography (EEG) data. [<link>](#)

**Human Movement Correction** Used a microcontroller, stereo camera, and OpenCV to detect markers with 3D coordinates in order to correct human body motion. [<link>](#)