

ANDREW MENDEZ

1 E Loop Rd, New York, NY aem336@cornell.edu

LinkedIn: <https://www.linkedin.com/in/interactivetech>

Github: <https://github.com/interactivetech> Portfolio: <http://andrewmendez.me/>

Education

CORNELL TECH AT CORNELL UNIVERSITY **New York, NY** **May 2016 - May 2018**

MS in IS in Connective Media - GPA: 3.54

Courses: Data Science in the Wild, Natural Language Processing, Bayesian Machine Learning, Machine Learning, Computer Vision, Learning and Decision Making, HCI, Startup Systems Engineering

UNIVERSITY OF CENTRAL FLORIDA **Orlando, FL** **May 2011- May 2015**

Bachelor of Science in Computer Engineering

Courses: Computer Graphics, Object Oriented Programming in Java, Algorithm Analysis in Java, Object Oriented Software Development, Embedded Systems in C

Skills

Libraries and Languages: Python, PyTorch, Tensorflow, Node.js, Javascript, Vuforia, ARKit, WebGL, Ansible, Java, C++, OpenCV, NLTK,

Concepts: AWS, SDLC, Hypothesis Testing, Topic Classification, Language Modeling

Work Experience

NYC Media Lab **New York, NY** **Jan 2018 - Present**

Fellow, *Combine Program*

- Lead developer for augmented reality application, Spaceplanar ([link](#)), which allows users to visualize and design spaces for event planning;
- Architecting advanced computer vision algorithms that will do room recognition, furniture recognition, and color-palette extraction for furniture and design recommendations in real event spaces. Implement using iOS, SceneKit, ARKit, Keras, and CoreML.
- Project received \$25k of funding from the NYC Media Lab Combine Program, a three month program that mentors graduate students to commercialize emerging technologies.

SVRF, Inc. **New York, NY** **May 2017-July 2017**

A startup (Techstars '18) building the first search engine for 360, VR and AR content, svrf.com

Full Stack Engineer Internship, VR applications developer

- Used Node.js and Cheerio.io to produce a web scraping and indexing system that indexes 360 internet video content for Angular 2 video player.
- Implemented 360 video play functionality on android browsers using Angular 2 framework.
- Developed 3D collision and graphics rendering pipeline for VR portal app using Three.js, Angular 2, Typescript

NYC MEDIA LAB **New York, NY** **Jan 2017-April 2017**

Fellow, *Verizon Connected Futures Prototyping and Talent Development program*

- Team Lead and Lead Developer, collaborating with two designers specialized in Virtual Reality Design.
- Awarded 17k fellowship to develop Mixed Reality distribution platform for advertisers to easily integrate digital advertisement into Mixed Reality experiences.
- Simultaneously led mobile development and backend development. Met fast-paced iterations and deadlines of iOS app, AR platform integration, and highly available backend server for QR code generation.

NANIT

New York, NY

Dec 2016 - May 2017

Algorithm Developer Intern

- Collaborated with remote team of Computer Vision developers mentoring me on Image Colorization project
- Developed real-time Image Colorization method to infer visual color in near-infrared camera video from baby monitor given past model of color video. Goal was to make method robust and implement on mobile app.

WORLD FUEL SERVICES

Doral, FL

Aug 2015-Aug 2016

Systems Analyst, IT Rotational Program

- DevOps Engineer: Configured and integrated quality cloud visualization tool (Netflix ICE) into IT department to analyze cost and usage for enterprise projects and software development life cycle (SDLC) environments.
- Architected automation pipeline and web application to decrease company's cost of cloud development by 66.7%.

MIT SUMMER RESEARCH PROGRAM

Cambridge, MA

2014

Media Lab, Prof. Pattie Maes, Open Hybrid Project openhybrid.org

Open Hybrid is a novel Internet-of-Things platform that utilizes an augmented reality (AR) interface to modify and reprogram the functionality of household objects.

- Used node.js to develop full-stack IOT platform needed for iPads to generate an AR interface and interact with Wifi enabled appliances. Created service that automatically generates a peer-to-peer network for different Wifi enabled appliances to communicate with each other.
- Programmed with socket.io and node.js to build interface to allow users to modify appliance in real-time.

Awards and Noteworthy Accomplishments

Text classification using Multilayer Perceptron and Maximum Entropy, CS740 course

Assignment for CS5740. Developing text classification model using bag-of-words features and n-grams. Will implement classification using multi-layer perceptron and maximum entropy(MaxEnt) and compare model's accuracy and robustness to language ambiguity. Will be developing and evaluating performance using the 20 Newsgroup dataset.

Highly Available API - Startup Engineering Final project

Developed highly-available api that provides color count in an image given an image url. Developed framework using Flask, ImageMagick, Gunicorn, and AWS. System was architected using AWS Load Balancer and EC2 instances to distribute traffic, where each EC2 instance had multiple flask servers handling requests. Also added simple caching to avoid unnecessary computation if image url was seen before. Resulted in handling 5k-10k requests per minute.

Machine Learning CS 5857 course :

Image Approximation using Random Forests ([link](#)), Face recognition using SVD and Logistic Regression ([link](#)), Image Search Engine using MultiLabel SVM ([link](#)).

Bayesian framework for Convolutional Neural Networks using Stochastic Gradient HMC:

Designed and Implemented bayesian framework for convolutional neural networks(CNNs) by pre-training convolutional weights using SGD ([link](#)). Applied a bayesian neural network as the fully connected layers for classification. Developed using Tensorflow and edward and evaluated Bayesian CNN on MNIST dataset and reported 95% acc after 30k steps, batch size 64.

Deep Learning Image Segmentation cleaning network: Co-developed with team of 4 to architecture that will improve fine-grained segmentation labels and improve segmentation on state of art PSPNet. Developed using PyTorch, made significant contribution in creating training visualization dashboard. Planning to submit to CVPR.

Real Time Deep Learning with Augmented Reality Thesis project: Team Lead and Lead Mobile Developer. Co-developed novel Augmented Reality(AR) Smart Kitchen system that provides instant understanding of food in

your kitchen, give you recommendations of what to dishes to make, and provides you detailed instructions on how to cook dish([link](#)). Developed novel AR projector-camera system to track gestures and offer hands-free AR experience to cooking.