

# Gokul Swamy

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## EDUCATION

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**University of California, Berkeley**

*August 2016 - May 2020*

B.S. Electrical Engineering & Computer Science, GPA: 3.91

Classes: ML, Deep Learning, Computer Vision, AI, Algorithms, Data Structures, Computer Architecture

## WORK EXPERIENCE

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**Intuit**, Software Engineering Intern ([link](#))

*May 2017 - August 2017*

- Built cross-platform JavaFX app that edits local files based on JIRA issues and pushes changes.
- Created dashboard to visualize information from testing/production environments with React.js/Bootstrap frontend and Express.js/PHP backend.
- Created iOS UI component framework with theming, grouping, and live prototyping in Swift.
- Used Latent Semantic Analysis, CNNs, and Character CNN's to classify product reviews into complaint groups to direct future development. Tracked complaint topics over time.

**UCSD Center for Wireless Communications**, Research Assistant ([link](#))

*May 2015 - August 2015*

- Used data from depth camera to detect whether physical therapy exercises were being performed correctly (and providing feedback otherwise) to improve recovery times.
- Performed data analytics and helped create computer vision algorithm.
- Paper published at IEEE 2016 Signal Processing in Medicine and Biology Conference.

## SELECTED PROJECTS (see [Github](#) for full list)

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**Take a Picasso**, CalHacks 3.0 Project ([link](#))

- A robotic sketch artist (draws a physical portrait of user based on image taken by smartphone).
- Detects a voice command, performs Canny edge detection in OpenCV to create a drawable image, and uses a Traveling Salesman approach to create a vectorized image for the Arduino to draw.
- Won Best Hardware, Best 3D Printed Hack, and a grant from the 1517 Fund.

**Email Data Extraction**, Machine Learning @ Berkeley Project for Intuit

- Attempted to autofill fields in tax returns based on data in user emails.
- Required classifying emails into tax-relevant categories and then extracting useful information.
- Implemented email parser, random forest clustering, and information extractor (named entity recognition, semantic path similarity, and Google's Knowledge Graph API).

**CS101: Application Design and Development for iOS**, MOOC

- Helping create online course to be released to the public through Berkeley's edX page.
- Giving lectures on Swift, MVC, UI/UX, Networking, Augmented Reality, and Machine Learning.

## ACTIVITIES

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**Machine Learning @ Berkeley**, Project Manager, Lead MOOC Developer ([link](#)) *August 2016 - Present*

- Managing Deep NLP project for Intuit. Developing online version of our student-taught course.

**Space Technologies @ Cal**, Project Member ([link](#))

*January 2018 - Present*

- Working with NASA Ames on reinforcement learning for autonomous resource rovers for moon.

**InterACT Lab (part of Berkeley AI Research)**, Research Assistant ([link](#))

*January 2018 - Present*

- Working on reinforcement learning for human-robot interaction under Prof. Anca Dragan.

## HONORS

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- Member of Eta Kappa Nu (EECS Honor Society)
- 2016 & 2017 WWDC Scholar (Granted by Apple based on iOS development project)
- Valedictorian of Del Norte HS Class of 2016
- Regents and Chancellors Scholar (Granted to top 2% of each incoming UC Berkeley class)

## SKILLS

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- Languages: Python, Swift, Java, HTML, CSS, Javascript, SQL, C
- Frameworks: Tensorflow, Pytorch, scikit-learn, React.js, Bootstrap, JavaFX, CoreML, Firebase