

# Adith Balamurugan

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## EDUCATION

### U.C. BERKELEY

**M.S. IN ELECTRICAL ENGINEERING & COMPUTER SCIENCE**  
Signal Processing & Computer Vision  
Expected May 2019 | Berkeley, CA  
Cum. GPA: 3.745 / 4.0

### BACHELORS IN COMPUTER SCIENCE

**BACHELORS IN STATISTICS**  
Conferred May 2018 | Berkeley, CA  
Quantedge Award for Academic Excellence, 2016-17  
Kraft Award for Freshmen, 2015-16  
Dean's List  
Cum. GPA: 3.861 / 4.0

### TEXAS ACADEMY OF MATH AND SCIENCE (TAMS)

(UNIVERSITY OF NORTH TEXAS)  
Grad. May 2015 | Denton, TX  
Summer Research Scholarship  
National Merit Finalist  
President's List  
Cum. GPA: 4.0 / 4.0

## COURSEWORK

### UNDERGRADUATE

Real Analysis  
Data Structures  
Machine Structures  
Discrete Math & Probability Theory  
Artificial Intelligence  
Efficient Algorithms  
Database Management  
Machine Learning  
Combinatorics & Randomized Algorithms  
Operating Systems  
Game Theory  
Time Series

### GRADUATE

Optimization Models  
Deep Reinforcement Learning  
Computational Geometry

## SKILLS

### PROGRAMMING

Frequent Use:

Python • Java • Git •  $\LaTeX$  • Unix • R  
Tensorflow • C++

Proficient:

C • C# • SQL/Databases • Node  
HTML • CSS • JS

## EXPERIENCE

### VISA INC. | DATA SCIENCE INTERN | NEXT-GEN OPERATION PRODUCTS

June 2018 – August 2018 | Foster City, CA

- Automated and generalized feature engineering part of ML pipeline with automatic feature selection and model evaluation
- Created and evaluated functions to glean categorical and temporal pattern/insights from "performance monitoring" time series data, collected from 3.3+ billion cardholders and thousands of clients

### JCPENNEY | DIGITAL ANALYST + BIG DATA INTERN

June 2016 – August 2016 | Plano, TX

- Worked with Big Data Scrum team on Market Basket Analysis for the ".com" channel using analytic tools such as Datameer
- Analysis on Customer Order trends to power more intelligent product suggestions and recommendations

## UNIVERSITY / RESEARCH

### IMAGE AND VIDEO PROCESSING LAB | RESEARCH ASSISTANT

April 2017 – Present | Berkeley, CA

Research with Dr. **Avideh Zakhor** focused in image processing. Projects include:

- One-Shot Incremental Learning Algorithm to run on Android phone for Indoor Asset Detection
- Working with researchers in UIUC and Cornell to determine width/height of certain crops from robotically collected RGB images and depths using RCNN

### DATA 8 | TEACHING ASSISTANT

August 2017 – May 2018 | Berkeley, CA

Responsibilities include course development, running lab/discussion section, and holding office hours.

### STATISTICS 88 | HEAD TEACHING ASSISTANT

August 2016 – December 2016 | Berkeley, CA

Worked with Professor **Alexander D'Amour**. Responsibilities included holding office hours, editing course text, and writing and grading assignments and quizzes.

### 3D TELE-IMMERSION LAB | RESEARCH ASSISTANT

May 2014 – August 2014 | Richardson, TX (University of Texas, Dallas)

Researched with Dr. **Balakrishnan Prabhakaran**. Worked with Microsoft Kinect and Visual Studio, using C++ and C# programming with Unity. Explored the areas for improvement in remote medical practice using skeleton and mesh interactions in virtual space.

## PROJECTS

### SIGNNET | END-TO-END ASL TO TEXT TRANSLATION

INFO 259 - NLP | August 2018 - December 2018 | Berkeley, CA

Leverages Tensorflow and Keras to handle video data of speaker performing **American Sign Language** and encodes the 5 key components of ASL signs to output highest likelihood text translation for given sequence

### ALLPAY | SECURE CLIENT-SIDE PAYMENT GATEWAY | FINALIST

Money 20/20 Hackathon | October 2015 | Las Vegas, NV

Payment gateway using Vantiv API which works alongside shopping systems and accepts any mobile wallet.