Adith Balamurugan

972-265-9471 | adithbalamurugan@gmail.com
Github: addit112 | LinkedIn: abalamurugan

EDUCATION

U.C. BERKELEY

M.S. in Electrical Engineering & Computer Science
Signal Processing & Computer Vision
Conferred May 2019 | Berkeley, CA
Cum. GPA: 3.727 / 4.0

Bachelors in Computer Science
Bachelors in Statistics
Conferred May 2018 | High Distinction
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
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
Natural Language Processing

SKILLS

PROGRAMMING

Frequent Use:
Python • PyTorch • Swift • CoreML
Tensorflow • C++ • Java • Git • Unix
Proficient:
C • C# • R • SQL/Rails • Node
HTML • CSS • JS • LaTeX

EXPERIENCE

SWINGVISION | Machine Learning Engineer

June 2019 – Present | Milpitas, CA

- Created calibration and reconstruction tool to generate ground truth ball positions during hits and bounces
- Implemented data pipeline and models to track players, predict ball events, stroke types, ball position, and velocity
- Converted PyTorch models to CoreML and implemented post processing in Swift for deployment on flagship iOS app

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

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.

PUBLICATIONS

"Online One-Shot Learning for Indoor Asset Detection" Master's Thesis, Department of Electrical Engineering and Computer Sciences, University of California, Berkeley, May 2019

"Online One-shot Learning for Indoor Asset Detection" Machine Learning for Signal Processing (MLSP) workshop, Pittsburgh, PA, October 2019

"In Situ Width Estimation of Biofuel Plant Stems" Electronic Imaging Conference 2019, Burlingame, California, January 2019