## **Arvind Iyengar**

linkedin.com/in/iyengararvind | https://github.com/aiyengar2

Address: 2168 Mornington Ln., San Ramon, CA 94582 Phone: (954) 249-5297 Email: arvindiyengar@berkeley.edu

#### **EDUCATION:**

## **Bachelor of Arts in Computer Science & Data Science**

Aug. 2015 to Present

University of California Berkeley, Berkeley, CA

Relevant Coursework: CS C8 (Foundations of Data Science), CS 61B (Data Structures), CS 170 (Efficient Algorithms & Intractable Problems), CS 188 (Intro. to Artificial Intelligence), STAT 140 (Probability for Data Science), STAT 150 (Stochastic Processes), INFO 159 (Natural Language Processing)

## **SKILLS AND PROJECTS:**

#### **Technical Skills:**

- Data Science, Artificial Intelligence, Machine Learning, and Natural Language Processing (Microsoft Bot Framework, Luis.ai, Wit.ai, sci-kit-learn, pandas, numpy, matplotlib)
- Building Applications (HTML/CSS/JS, jQuery, React, Meteor, Node, Express, Django, Flask, Ruby on Rails)

- Containerization (Docker, Kubernetes)
- Designing and utilizing HTTP REST APIs
- Mobile Development (Swift/Objective-C)
- Miscellaneous (make, systemd, gunicorn, ssh, sftp, etc.)

#### **Technical Projects:**

- Developed a simple Flask application exemplifying principles of micro-service architecture using Docker containers
- Built a probabilistic decoder to break codes encrypted using a cipher using Markov Chain Monte Carlo methods
- Conducted research on President Obama's speeches using text analysis (Latent Dirichlet Allocation) and data visualization techniques
- Co-wrote, revised, and finalized the primary textbook of STAT 88 (Probability & Mathematical Statistics in Data Science)
- Developed a classifier function for music based on genre using a K-nearest neighbor algorithm in Python
- Produced an online map of Berkeley capable of zooming using a quadtree data structure and routing using the A\* search algorithm

## **WORK EXPERIENCE AND ORGANIZATIONS:**

#### CS C8 - Foundations of Data Science

an. 2016 to Present

Undergraduate Student Instructor (Fall 2017, Summer 2017, Spring 2017), Group Tutor (Fall 2016), Academic Intern (Fall 2016, Spring 2015)

- Managed and developed scripts for auto-grading assignments using a Docker container hosted on a cluster of servers at BIDS
- Taught supplementary material and supervised the completion of lab assignments during weekly labs to a class of 30 students
- Held office hours each week to aid students by answering any of their queries or concerns regarding the course material
- Collaborated with other members of the staff during weekly staff meetings to plan course logistics
- Manually graded numerous homework assignments, labs, projects, and exams for the class during the course of the semester

### Alpha Epsilon Zeta Professional Fraternity, Incorporated

Sep. 2015 to Present

Pledge Coordinator (Fall 2017), Technology Chair (Spring 2017, Fall 2016)

- Rebuilt the entire website (Flask) & set up hosting / system management (systemd, gunicorn) on an Apache Web Server hosted by OCF
- Planned and coordinated a multitude of professional activities, workshops, and assignments for a pledge class of 10 UC Berkeley students
  geared around developing their professional skills, providing academic assistance, and preparing them for future successes
- Organized a professional reality forum on VR for 200+ people that hosted a panel of industry professionals from various VR companies
- Worked with a team on presentations such as case studies, stock pitches, venture capitalist pitches, and business presentations

# **Berkeley Institute of Data Science**

Jun. 2016 to Present

- Software Engineer (Infrastructure)
  - Managed and introduced changes to JupyterHub infrastructure (Kubernetes, Google Cloud, Docker) used by Berkeley's Data 8 class
  - Collaborated with a team of five engineers to create documentation used to set up our current infrastructure in other universities

Paradigm Consulting Jan. 2016 to Present

Technical Consultant (Fall 2017, Spring 2017, Fall 2016), Associate Consultant (Spring 2016)

- Developed an HR software solution using Meteor for a company focused on producing performance sports nutrition products
- Designed a strategic roadmap for future success focusing on diversification, product development, market penetration, and global expansion for a nonprofit organization focused on providing resources to and certification for HR Professionals
- Presented quarterly, midterm, and final deliverables to the Board of Directors of each of our clients

BerkeleyTime Jun. 2016 to Present

Backend Engineer

- Collaborated with a team of backend engineers to maintain a course catalog website for over 25,000 UC Berkeley students
- Worked with the Django backend to optimize efficiency and accuracy of the website's services and implement a new scheduling system

# Razorfish (Publicis Groupe) Jun. 2016 to Dec. 2016

Presentation Layer Engineer (Fall 2016), Machine Learning Intern (Summer 2016)

- Analyzed and documented various Natural Language Processing (NLP) Frameworks such as Wit.ai, Luis.ai, and Stanford SEMPRE
- Implemented Wit.ai, Luis.ai, and Microsoft Cognitive Services in conjunction with a Microsoft Bot Framework application
- Designed several Node.js applications featuring bots that worked in various channels such as Facebook Messenger, Skype, and Slack
- Developed an Node.js API to allow custom clients to query Microsoft Bot Framework applications running on external servers
- Constructed a Swift client that gueries a custom Microsoft Bot Framework Application running on AWS Elastic Beanstalk / AWS Lambda