Arvind Iyengar

(954) 249-5297 | iyengararvind@gmail.com | linkedin.com/in/iyengararvind | github.com/aiyengar2

EDUCATION:

Bachelor of Arts in Computer Science *(GPA – 3.485)*   **Expected Graduation: May 2019**
University of California - Berkeley (Berkeley, CA)
Relevant Coursework: CS 186 (Databases), CS 161 (Computer Security), CS C100 (Data Science), INFO 159 (Natural Language Processing), STAT 150 (Stochastic Processes), STAT 140 (Probability for Data Science), CS 188 (Artificial Intelligence), CS 170 (Efficient Algorithms & Intractable Problems)

WORK EXPERIENCE:

UC Berkeley CS / STAT Department - Undergraduate Student Instructor / TA   **Jan. 2016 to Present**
Computer Security (Fall 2018), Probability for Data Science (Spring 2018), Foundations of Data Science (Fall 2017, Summer 2017, Spring 2017)
- Served as a head TA for Fall 2018 (Computer Security) and Summer 2017 (Data Science)
- Supervised the completion of lab assignments during weekly labs to a class of 30 students, ran workshops for supplementary material, and 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 on a weekly basis to plan course logistics, develop & update assignments / projects / auto-grading scripts, and manually grade numerous homework assignments, labs, projects, and exams over the course of each semester

Amazon.com, Inc.   **Jun. 2018 to Aug. 2018**
Software Engineer Intern – Lambda Console (Summer 2018)
- Collaborated with SDEs & PMs to analyze & document all existing data/metrics emitted by the Lambda Console that pertain to customers
- Engineered a log tagging database design to reduce the query time necessary for running complex customer data analytics queries on a frequent basis on existing raw log data sources, which are housed in slow data centers with limited access
- Designed a system that runs SQL queries for customer data analytics in some frequency (i.e. on a daily / weekly / monthly / quarterly / yearly basis) on any AWS Redshift database and deposits the query results as a CSV file to an AWS S3 bucket
- Productionized the SQL query runner by recreating it as a serverless application using an AWS SAM / CloudFormation template, which required setting up AWS resources for core program logic (AWS Lambda functions, AWS S3 Bucket), networking / security (AWS VPC subnets / security groups / gateways & AWS Key Management Service) and monitoring / execution (AWS CloudWatch Logs & Events)
- Generated a Bash script for deploying / validating the system and documentation to help with the initial setup and use of the system

Paradigm Consulting   **Jan. 2016 to Jun. 2017**
Technical Consultant (2016-2017), Associate Consultant (2015-2016)
- Developed a Meteor / React application for a company focused on producing performance sports nutrition products (2016-2017)
- Designed a strategic roadmap for future success focusing on diversification, product development, market penetration, and global expansion for a nonprofit focused on providing resources to and certification for HR Professionals (2015-2016)
- Presented quarterly, midterm, and final deliverables to the Board of Directors of each of our clients

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 queries a custom Microsoft Bot Framework Application running on AWS Elastic Beanstalk / AWS Lambda

PROJECTS & EXTRACURRICULARS:

Technical Projects:
- Rebuilt fraternity website (Flask) & set up hosting / system management (systemd, gunicorn) on an Apache Web Server hosted by OCF
- Developed simple Flask application exemplifying principles of microservice architecture using Docker containers and Kubernetes
- Managed, updated, and documented the Berkeley Institute of Data Science's JupyterHub infrastructure (Kubernetes, Google Cloud, Docker), which is currently used by several of Berkeley's data science courses, including Data 8, CS C100, and Stat 140
- Collaborated with a team of Berkeleytime backend engineers to maintain a course catalog website for over 25,000 UC Berkeley students by updating Django backend to optimize the efficiency & accuracy of the website's services and implementing a new scheduling system
- 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

Extracurriculars:
- Alpha Epsilon Zeta Professional Fraternity: VP of Prof. Dev. (2018-2019), Pledge Coordinator (2017-2018), Tech Chair (2016-2017)
- Berkeley Institute of Data Science (BIDS): Infrastructure Software Engineer (Spring 2017, Fall 2016)
- Berkeleytime: Backend Engineer (Spring 2017, Fall 2016)
- Data 8: Group Tutor (Fall 2016), Academic Intern / Lab Assistant (Fall 2016, Spring 2015)