Arvind Iyengar

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EDUCATION:

Bachelor of Arts in Computer Science **Expected Graduation: May 2019**

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 microservice 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 **Jan. 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 autograding 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
- Redesigned pledge curriculum to cover additional technical topics (Full Stack Development, Microservices / HTTP REST APIs, Docker / Kubernetes Fundamentals) and business topics (Microsoft Excel, IB / Valuation, Consulting / Case Studies, Personal Finance)
- 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 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 the efficiency & 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 queries a custom Microsoft Bot Framework Application running on AWS Elastic Beanstalk / AWS Lambda