Arvind Iyengar

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EDUCATION:

University of California – Berkeley   **Expected Graduation: May 2019**
Bachelor of Arts in Computer Science (GPA – 3.5)
Relevant Coursework: Databases, Computer Security, Principles and Techniques of Data Science, Natural Language Processing, Stochastic Processes, Probability for Data Science, Artificial Intelligence, Efficient Algorithms & Intractable Problems

WORK EXPERIENCE:

Amazon.com, Inc.   **Jun 2018 to Aug 2018**
Software Engineer Intern – Lambda Console (Summer 2018)
- Analyzed & documented all existing data/metrics emitted by the Lambda Console that pertains to customers
- Engineered a log tagging database design to reduce the query time necessary for running complex customer data analytics queries frequently 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 (Lambda, S3), networking / security (VPC subnets / security groups / gateways & key management) and monitoring / execution (CloudWatch Logs & Events)
- Generated a Bash script for deploying / validating the system and docs to help with the initial setup and use of the system

UC Berkeley CS / STAT Department - Undergraduate Student Instructor / TA   **Jan 2017 to Present**
Computer Security (Fall 2018), Probability (Spring 2018), 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 weekly lab assignments to a class of 30 students, ran workshops for supplementary material, and held weekly office hours to aid students by answering any of their queries or concerns regarding the course material
- Collaborated with other staff members on a weekly basis to plan course logistics, develop / update / grade assignments

Razorfish (Publicis Groupe)   **Jun 2016 to Dec 2016**
Presentation Layer Engineer (Fall 2016), Machine Learning Intern (Summer 2016)
- Analyzed & documented features of Natural Language Processing (NLP) frameworks such as Wit.ai, Luis.ai, and SEMPRE
- Implemented Wit.ai, Luis.ai, and Microsoft Cognitive Services in conjunction with a Microsoft Bot Framework application
- Designed Node.js applications featuring bots that work in various channels such as Facebook Messenger, Skype, and Slack
- Developed a Node.js API to allow custom clients to query Microsoft Bot Framework applications running on external servers
- Constructed a Swift client that queries a Microsoft Bot Framework Application running on AWS Elastic Beanstalk / Lambda

Paradigm Consulting   **Jan 2016 to Jun 2017**
Technical Consultant (2016-2017), Associate Consultant (2015-2016)
- Developed a Meteor 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

TECHNICAL PROJECTS AND SKILLS:

Projects:
- **Website:** Rebuilt fraternity website in Python Flask & set up hosting (systemd, gunicorn) on an Apache Web Server
- **Microservices:** Developed Flask application exemplifying microservice architecture using Docker containers and Kubernetes
- **Berkeley Institute of Data Science (BIDS):** Managed, updated, and documented the BIDS JupyterHub infrastructure (Kubernetes, Google Cloud, Docker), which is currently used by several of Berkeley's data science courses
- **Berkeleytime:** Collaborated with a team of backend engineers to maintain a course catalog website for over 25,000 UC Berkeley students by updating Django backend and implementing a new scheduling system
- **Probabilistic Decoder:** Built a probabilistic decoder to break encrypted ciphers using Markov Chain Monte Carlo methods
- **Speech Analysis:** Researched Obama's speeches using text analysis (Latent Dirichlet Allocation) and visualization techniques
- **Statistics Textbook:** Co-wrote, revised, and finalized the textbook of Probability & Mathematical Statistics in Data Science
- **Music Classifier:** Developed a classifier function for music based on genre using a K-nearest neighbor algorithm in Python

Skills:
- **Programming Languages:** Python, Java, C, Go, HTML/CSS/JS, Ruby, Swift, Objective-C
- **Libraries/Frameworks:** React, Meteor, Flask, Django, pandas, matplotlib, sci-kit-learn, jQuery, Node.js, Rails