ARVIND IYENGAR

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SOFTWARE DEVELOPMENT ENGINEER

- Strong foundations in software engineering & development principles with a passion for learning about new technologies, delivering customer impact, and designing simple, readable, and maintainable code in a world of complex applications
- Excited about driving product design and development that leverages modern technologies like cloud and AI
- Highly self-motivated with strong communication skills stemming from a diverse background in teaching technical concepts

TECHNICAL COMPETENCIES

Programming Languages: Python, Java, Go, Javascript (Node.js, Express.js), Bash, Ruby, C, HTML / CSS, SQL
Cloud Technologies (AWS): Cloudformation, Lambda, EC2, ECS, S3, CloudWatch, CloudTrail, IAM, SQS, SNS, Redshift, DynamoDB
Development Methodologies: Object Oriented Programming (OOP), Test Driven Development (TDD), Agile Development
Data Analysis Tools: Jupyter Notebooks, NumPy, Pandas, Matplotlib, Scikit-learn, NLTK, Excel

EDUCATION

University of California Berkeley – Bachelor of Arts in Computer Science (GPA – 3.475)
Relevant Coursework – Algorithms, Data Structures, Databases, Computer Security, Cryptography, Natural Language Processing, Stochastic Processes, Probability Theory, Principles & Techniques of Data Science, Artificial Intelligence, Machine Structures
Teaching Experience – Computer Security (Head TA for Fall 2018 & Spring 2019), Probability Theory (Spring 2018), Data Science (Head TA for Summer 2017, TA for Spring 2017 & Fall 2017, Lab Assistant / Grader for Spring 2016 & Fall 2016)

PROFESSIONAL EXPERIENCE

AMAZON.COM INC. – SEATTLE, WA **Jun 2018 – Aug 2018, Jul 2019 - Present**

Software Development Engineer / SDE Intern – AWS SageMaker, AWS Lambda

- Engineered a log tagging database design for AWS Lambda to reduce the query time necessary for running complex customer data analytics queries frequently on existing raw log data sources housed in slow data centers with limited access
- Designed and productionized a serverless application on AWS SAM / Cloudformation that executes ETL (Extract, Transform, Load) workflows via AWS CloudWatch Events and AWS Lambda on any specified AWS Redshift database
- Extended the serverless application by adding monitoring via AWS CloudWatch Logs, customizable networking and access management via AWS VPC / IAM, and easy deployment / validation via operational scripts written in Bash
- Collaborated with a team of engineers across AWS SageMaker to build out the product in a new AWS region, requiring a deep understanding of core AWS technologies such as Lambda, Cloudformation, CloudWatch, IAM, and other internal tools

PUBLICIS GROUPE (RAZORFISH) – SAN FRANCISCO, CA **Jun 2016 – Dec 2016**

Presentation Layer Engineer / Machine Learning Intern

- Constructed a Express.js (Node.js) application built on Microsoft Bot Framework, Microsoft Cognitive Services, and a natural language processing framework (Wit.ai) that enabled clients to quickly train / deploy chat bots on FB Messenger, Skype, and Slack
- Redesigned the application as a microservice hosted on AWS Lambda and designed a simple front-end iOS client in Swift

PARADIGM CONSULTING – BERKELEY, CA **JAN 2016 – JUN 2017**

Technical Consultant / Associate Consultant

- Architected a web application in Meteor and MongoDB that hosts and allows the content management of a "competency dictionary" used by the client's Human Resources department to evaluate the growth prospects of their employees
- 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

TECHNICAL PROJECTS

Web Development – Reengineered fraternity's website as a Python Flask application hosted on an Apache web server that forwards requests to the application using Gunicorn and runs the long-running application as a Linux systemd service
Microservice Architecture – Created a simple serverless application that stands up two Flask programs running on different Docker containers that communicate with each other through HTTP requests to demonstrate modern software architecture
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