NIHAL BALIVADA

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SKILLS

- **Programming Languages and Frameworks:** Python, Java, Ruby, C++, Linux, Flask, Spring Boot, MongoDB, Postgres, MySQL, JUnit, Mockito, Cucumber, React, PyTorch, TensorFlow, Keras, Pandas, NumPy.
- **Tools:** Git, Bash, Docker, Kafka, RabbitMQ, Kubernetes, Amazon Web Services (AWS) -- notably ElasticBeanstalk, CloudFormation, EC2, ELB, Lambda, S3, Athena, CloudWatch, RDS (Aurora MySQL), DynamoDB.
- **Competencies:** Object-Oriented Programming, Networking, Troubleshooting, Continuous Integration, Continuous Delivery, Test-Driven Development, Web Application Development, Large-Scale Systems Design, Scripting, Infrastructure as Code, Multithreading.

WORK EXPERIENCE

Amazon Web Services – Software Development Engineer
June 2022 – May 2024 Seattle, WA

Amazon Web Services (AWS) is a cloud services platform which offers customers an extensive range of application services including servers, storage, and databases among others through the Internet using a pay-as-you-go pricing model.

- Demonstrated proficiency as a Software Development Engineer in two distinct AWS services - namely AppRunner and ElasticBeanstalk. They are highly-available, multi-threaded, fault-tolerant and geographically-distributed systems that allow customers to deploy a wide variety of conventional and containerized web applications(Node.js, Python, Java, Docker) to AWS without having to worry about the underlying infrastructure.
- Collaborated on various operational tasks, resulting in a remarkable reduction of on-call ticket volume from 70 to 10 per week, showcasing a strong commitment to achieving operational excellence.
- Spearheaded the expansion of AppRunner service by facilitating it in three additional AWS regions, thereby augmenting its availability to a total of eight geographical regions resulting in 10% increase in customers.
- Owned the full software lifecycle of integrating fraud checker into AppRunner Service based on customer's containment score to prevent fraudulent activity. This saved approximately USD$100k of AWS cost per year.

IISc Bangalore – Research Intern under Prof.M.N.Murty, CSA Department.
May 2019 – October 2019 Bangalore, India

- Analyzed significance of stop words and rare words in Wikipedia corpus leveraged for generating word embeddings from the Word2Vec algorithm. Replicated the benchmark results of Node2Vec, DeepWalk, Graph Convolutional Network and Attention network algorithms.

PROJECTS

Look the part IOS app – *(Swift, Pytorch, Sklearn, REST, AWS CLI)*

- Developed a custom computer vision algorithm by utilizing fine-tuning techniques for face and color recognition models on characters from various TV shows, deploying with the Resnet101 model as backbone.

Multimodal fake news classification – *(Python, Pytorch)*

- Designed and trained a custom neural network architecture. The features extracted from images via Resnet-50 were channeled into a multi-layered perceptron. The resultant features were passed through a DistilBert model for a comprehensive six-category classification.
- Employed a tailored loss function, achieving benchmark accuracy of 87%.

EDUCATION

University of Oregon, Sep 2024 - present
PhD - Computer Science

State University of New York at Buffalo, June 2022 *GPA: 3.76/4*
Master of Science – Computer Science and Engineering

Andhra University, April 2020 *GPA: 8.33/10*
Bachelor of Technology – Computer Science and Engineering