

ANAND SAI MISHRA

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EDUCATION

Master of Science, Computer Science Aug 2018 - Dec 2020
California State University, Dominguez Hills (CGPA: 3.618)

Bachelor of Technology, Computer Science and Engineering July 2013 - June 2018
National Institute of Technology Rourkela, Odisha, India

WORK EXPERIENCE

Adjunct Lecturer of Computer Science at CSU Dominguez Hills Sept 2019 - Dec 2020

- Developed courses that involved subjects like *Operating Systems and Networks (CTC228)*, *Computer Forensics and Investigation (CTC328)* & *Advanced Database Management Systems (CSC553)*.
- Taught topics like virtualization, file management systems, process handling, networking layers, network security, database management, data analytics, modern data center optimization and utilizing Artificial Intelligence in security.
- Researched on various computer networking and Data Optimization techniques.
- Helped develop the coursework and introduce the subject IOS Programming.

IOS Application Developer at CodePath June 2020 - Dec 2020

- Designed multiple IOS applications that included a Twitter Client, an application to submit movie review Application (MagicMixer) and Restaurant Review Application (Yelpy).
- Designed a COVID Screening application that determines if the user needs to isolate themselves based on the self reported conditions. Created using SWIFT 5 and AlamoFire.
- Taught students from undergraduate and graduate programs on various software development methodologies to develop an application for the Apple Ecosystem.

Graduate Research Assistant at CEIE, CSU Dominguez Hills Feb 2019 - August 2020

- Implemented a database for student management for the incoming international students which replaced the existing filing systems.
- Improved the efficiency of the office and reduced the time required to process requests from students by 2 days.
- Implemented ML-based prediction algorithms to predict and focus the advertisements to high yield areas for International Student Admissions.

Corporate Data Analytics Intern at Neyveli Lignite Corporation May 2016 - June 2016

- Worked on Corporate System Administration, Network Management.
- Optimized the industrial and power-plant data collection and analytics.
- Maintained the of enterprise resource management system.
- Assisted in implementation of the network backbone in the industry improving the network efficiency by 50%.

CORE COMPETENCIES AND SKILLS

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|------------------------------|--|
| Programming Languages | Python, JavaScript C, C++, Swift, HTML. |
| DevOps | SDLC, Object-Oriented Design, Agile Development, Git |
| Platforms | Angular, Rest API, Wordpress, LINUX Bash, BERT. |
| Frameworks | YOLOv3, TensorFlow, PyTorch, SciPy, Keras, Mininet, RYU. |
| Cloud Tools | Terraform, EC2, Ansible, Route53, GitLab, Docker, CI/CD. |
| Tools and testing | Gremlin, DataDog, Sentry, ELK. |
| Non-Technical | Multilingual, International Student, Photographer, IEEE Member: 97240149 |

PROJECTS AND ACADEMIC EXPERIENCE

Improving Sentiment Analysis using Emotion Detection Nov 2020

This project is developed using PyTorch and BERT. It is posed and developed with the goal to detect and classify early detection of Depression in teenagers. With the current teens choosing to use texting based communication more than audio or video based communication. It makes it important for us to be able to detect the emotions from written words. Hence this project attempts to detect the early signs of depression using natural language processing and bidirectional classifier.

Handwriting Recognition for numbers in Roman Script [GitHub] June 2020

Developed a Machine Learning and Artificial Neural Network powered handwriting detection system using TensorFlow Framework and Keras Backend to enable handwriting recognition with 99% accuracy.

IMDB - Movie Review sentiment analyser [GitHub] June 2020

Developed a TensorFlow and Keras(Backend) powered sentiment analyzer that can detect if the review left for a particular movie is good or bad based on the terms used in the Review. It uses word embedding, one hot encoding for the mapping to achieve 82% efficiency.

Real-Time Object Detection using YOLO v3 Dec 2019

Developed projects and researched about real-time object detection on camera feed and implement it for self-driving situations such as on-road situation and pedestrian detection.

Machine Learning based Implementation of the shortest-path algorithm in data-center Aug 2019

Developed VM, MB and VM-MB based algorithms for middle-box placements in a k-array data center. This assisted in energy based optimization for virtual machine replication.

Asynchronous Cryptography based Inter-Vehicular Ad-Hoc Message Authentication Aug 2019

Worked on a research project based on using asynchronous methods to authenticate messages being passed between various vehicles and posts appointed at the roads for guidance and updates.

Lwitter - Twitter Client using Twitter API (IOS Application) [GitHub] May 2018

Built on Xcode 12, Alamofire and Twitter Official API to build a twitter Client that can serve as the main twitter client for users.

Home Media Center based on RPi 4 May 2020

Developed a personal streaming system as an IOT project using RPi4 and Linux. It is used to broadcast various streaming services to the TV from the system.

DEVOPS AND CLOUD PROJECTS

Deployed Remote Lab in AWS for students to access September 2020

While teaching Computer Networks during the lockdown period we couldn't use the physical labs. So using Terraform as the infrastructure provisioning tool alongside AWS CloudFormation and Ansible as the configuration tool created a virtual lab with linux VM's for students to practice their skills in networking technology.

Cloud Resume Challenge December 2020

I created a static resume site using HTML/CSS and hosted it on a personal server on my private domain using AWS tools such as Route 53, S3 and CloudFront. Also used AWS certification manager to secure the website using SSL certificates and security standards. It used the CI/CD using GitLab and CDN using CloudFront.

Chaos Engineering: Gremlin tool utilization December 2020

This project involved running a web-server on EC2 and testing Chaos Engineering Principles on it. Creating a DynamoDB instance containing resources for the web-page. Created a IAM role with AdministratorAccess Privileges to use the service. Then installed Gremlin agent on the web-server and attacked the web-server with CPU, network and process overloading attacks to see the effects then recorded the effects of various attacks on the Cloud resources.

Deployment in Google Kubernetes Engine December 2020

This project was developed in an attempt to gain hands on experience in Google Cloud Platform specifically Docker, Google Kubernetes Engine, NGINX Hosting and CI/CD Pipelines. Deployed an existing web page using containers in the GKE and used all of the backing of a gaint CI/CD network on GCP.

LEADERSHIP SKILLS

International Student Representative, Associated Students Inc. Feb 2019

Represented the international student interests and queries at the Board of Directors at the university and advocated for the rights and interests of the International Students.