SASANK MARABATTULA

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EDUCATION

Masters in Computer Science **Expected May 2024**

North Carolina State University, Raleigh ***GPA: 4.0***

Coursework: Design & Analysis of Algorithms, Database Management Concepts & System, Object Oriented Design & Development, Cloud Engg, Software Engg, Automated Learning Data Analysis, Neural Networks, Statistics for Engineers

Bachelor of Engineering in Computer Science and Engineering **Aug 2015 – Apr 2019**

University College of Engineering, Osmania University, Hyderabad ***GPA: 3.7*** *(9.04/10)*

Coursework: Data Structures, OS, Web Dev, Cloud Computing, Programming Languages Design, Object Oriented Programming, DBMS, Distributed Systems, Computer Networks, Internet Protocols, Data Science, Data Mining, Artificial Intelligence

TECHNICAL SKILLS

Languages : Python, SQL, PL/SQL, Java, Ruby, C++, C, Matlab, R, Shell Scripting
Databases : SAP HANA, Oracle SQL, MongoDB, MySQL, SQLite
Web Development : HTML, CSS, PHP, Javascript, Node.js, AngularJS,ReactJS
Tools : Git, Github actions, GCP, Docker, Postman, AWS, Kubernetes, SAP (BODS, SDI)
ML Frameworks : numpy, pandas, spaCy, nltk, sklearn, Tensorflow, PyTorch, matplotlib, seaborn, SAM, RoboFlow

PROJECTS

Sync-Ends Library: Developed a Python Library that can detect any change across Postman APIs & instantly send a notifications on Slack, Teams & Email. Deployed automated CI/CD using Github actions & executed 27 successful test cases, resulting in 86% code coverage. **Tools:** Python, CI/CD, Git branching, Github actions, Codecov, Test Driven Development

Online Bookshop App: Designed and deployed a RESTful bookshop app with Ruby on Rails, SQLite, & GitHub pipelines. Included user reviews, payment gateway, transaction history & URL restrictions. Employed Agile practices, integrating 20+ test cases & deployed on Docker , achieving 90% peer rating. **Tools:** Ruby on Rails, SQLite, Docker, Git

Blueberry Detection: Computed a segmentation dataset using Computer Vision techniques, Segment Anything Model (SAM) to obtain blueberry masks in images. Deployed a segmentation model to predict blueberry masks using RoboFlow MLOps, with 98% accuracy & mAP. **Tools:** Python, RoboFlow, PyTorch, Computer Vision, Deep Learning, SAM, MLOps, Segmentation

Search Engine using Python: Implemented a natural language search engine for the Stack Overflow dataset, using NLP tokenization & named entity recognition, resulting in enhanced search results. **Tools:** Python, NLP, sklearn, spaCy

RELEVANT EXPERIENCE

USDA-ARS SCINet Forage and Range Research Lab **Jun 2023 - Aug 2023**

Data Science Intern | Python, PyTorch, Tensorflow, Data Mining, Deep Learning, Image Processing, Git *Logan, UT, USA*

- Refined drone images to predict the crop yield using data mining & computer vision techniques. Developed a neural network model to automate stem density calculation in wheatgrass images, potentially reducing resources costs by 80%.

Deloitte USI (Offices of US) **Jun 2019 - Jul 2022**

Software App Developer | Python, SAP Tools (HANA, Data Services, SDI), SQL, Shell Scripting *Hyderabad, India*

- Designed the architecture and implemented secure data pipelines on Deloitte's personnel data warehouses, BODS and SDI Flowgraphs and generated KPI metrics using complex HANA SQL & PL/SQL DBMS objects, resulting in 50% reduction in resources and project time which led to significant cost savings for the firm, while maintaining Customer SLA.
- Automated data loads & test plans with Shell Scripts, Python, SAP API's and ETL mechanisms with SQL procedures which eliminated hierarchy refresh redundancy and saved 50% of manual efforts.
- Deployed effective smoke test cases, averaging 10+ bugs per app which expedited pre-production resolution and effective development. Also migrated various legacy apps to SAP HANA Cloud.

Deloitte USI (Offices of US) **Jan 2019 - Jun 2019**

Software Intern | Python, NLP, HANA, SAFe *Hyderabad, India*

- Developed a Python automation script with XML parsing and HANA tools, automating the generation of base source objects for hierarchical fields, reducing 60% manual documentation efforts.
- Designed a text search engine using Python, NLP for fetching most similar records from a large dataset.

ACHIEVEMENTS

- Finalist in JP Morgan Chase's Code for Good Hackathon, where an end-to-end android application was delivered for a Non-Profit organization to facilitate volunteering work for their users.
- Completed certifications in Cloud Computing, Data Science, Data Mining, Machine Learning & Deep Learning courses.
- Led end-to-end development of a large-scale project, overseeing design architecture and peer management, and received recognition and an award for exceptional contributions.