Mounika. Dasa

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MSR
Cognitive Science
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GitHub Profile
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Education

•Indian Institute Of Technology, Kanpur
Present — MSR-Cognitive Science

•Sri Indu Institute Of Engineering and Technology
2017-2021 — BTECH Computer Science

•Sri Chaitanya Junior College
2015-2017 — Board of Intermediate Education, Telangana

•Sharada Vidyalaya High School
2015 — Board of Secondary Education, Telangana

Experience

•Wipro *Feb 2022 - Sep 2022*
Project Engineer — Bangalore

1. Developed and managed the backend of a banking website using React, ExpressJS, NodeJS, MongoDB, and Azure.
2. Led the development of two web applications targeting both customer and admin users, constructing over 20 RESTful APIs. These APIs encompassed crucial functionalities such as login/sign-up, transaction viewing, user addition, and profile management.
3. Implemented robust authentication frameworks, including two-factor authentication, and collaborated with DFINITY for secure information storage.
4. Optimized response time by 25% through strategic codebase refactoring and database design enhancements. Successfully transformed existing databases into both relational and non-relational structures, resulting in a 20% performance improvement.
5. **Tools:** HTML | CSS | React | ExpressJS | NodeJS | npm | SQL | MongoDB | Azure Cloud Services

•Mouri Tech *May 2021 - Oct 2021*
Data Analyst Intern — Hyderabad

1. Research and transform information from the raw data into an easily understood analysis that identifies trends and insights of the organization. Created dashboards using Excel and Tableau.
2. Worked on the project "Revenue Analysis," where I built a predictive model to forecast the revenue percentage of a property using the attributes in the dataset.
3. Executed tasks encompassing a spectrum of data analysis techniques, including univariate and bi-variate analyses, correlation assessments, feature transformations, and imputations. Additionally, contributed to the project by constructing a predictive model utilizing linear regression.
4. **Tools:** Microsoft Excel | Tableau | Python (NumPy, Pandas, SciPy, Matplotlib/Seaborn) | Machine learning libraries (Scikit-learn, TensorFlow, PyTorch) | Data imputation tools (fancyimpute, KNN imputation libraries)

Projects

•Disease prediction using machine learning *March 2021*
Mentor: Dr. Garlapati Narayana (Prof & HOD - Dept. of CSE, Sri Indu Institute of Engineering and Technology)

1. **Project Description:** This **Machine Learning project** is used to **predict diseases based on the symptoms** provided by the user.
   We utilized three different machine learning algorithms: **Decision Tree, Random Forest Classifier, and Naive Bayes to predict diseases**.
   The project also employed **TKinter** for creating the **graphical user interface (GUI)**.
2. **Tools & Technologies Used:** Python TKinter, Machine learning Algorithms (Decision Tree, Random Forest, Naive Bayes Classifier)

•E-Learning system platform *Dec 2021*
Mentor: Dr. Garlapati Narayana (Prof & HOD - Dept. of CSE, Sri Indu Institute of Engineering and Technology)

1. **Project Description:** This is an **E-learning** platform solution designed to manage online courses and surveys.
2. **Tools & Technologies Used:** Django, HTML, CSS, Bootstrap, SQLite, Heroku

•Crops and Fertilizers recommendation system. *March 2019*

Smart India Hackathon - domain: Heritage & Culture

1. **Project Description:** This innovative **machine learning-based website** offers personalized **recommendations for optimal crop selection, appropriate fertilizers, and the early detection of crop diseases**.
   By inputting soil data and specifying the type of crop being cultivated, the system **predicts soil deficiencies** and excesses in minerals and nutrients.
   It then provides tailored **recommendations** for enhancing soil health and crop yield, contributing to sustainable and efficient agricultural practices.
2. **Tools & Technologies Used:** HTML, CSS, FLASK, Python Machine Learning Algorithms

•College management database using blockchain technology *Sep 2021*

Hackthon - Hack-MIT-WPU

1. **Project Description:** We have developed a secure website for a college to store and manage students' data with utmost **integrity**.
   The primary objective is to prevent any **fraudulent issuance of certificates** through illegal means. To ensure the highest level of trust and transparency, the data is securely stored on a **blockchain**.
   This way, any potential attempts to **tamper with the data** in the future can be reliably detected and addressed, safeguarding the **authenticity and credibility** of students' records..
2. **Tools & Technologies Used:** HTML, CSS, Javascript, Dfinity

•Designing hard to break text-based captchas using Gestalt principles *Jan 2023*

Course Project : Applied Cognitive Science, IITK

1. **Project Description:** The project aims to create a system to design **hard-to-break text-based captchas** using **Gestalt principles**
2. **Tools & Technologies Used:** Python OpenCV

•Created an antinudge frontend website *March 2023*

Course Project : Applied Cognitive Science, IITK

1. **Project Description:** The website implemented several key features to **ensure ethical design** and prioritize user well-being.
   Notably, it incorporated **Payment Pots** enabling users to set and track spending limits, **fostering responsible financial management**.
   The inclusion of **Price History** offered insights into product **pricing trends**, aiding users in **making informed decisions** and identifying good deals.
   To **avoid emotional manipulation**, the website carefully used **images without faces**. Additionally, it refrained from using aggressive language and eliminated dark patterns, providing a transparent and user-controlled experience.
2. **Tools & Technologies Used:** HTML, CSS, Javascript

•Assessing readability scores of Hindi text with OCR-converted images for algorithmic analysis. *April 2023*

Course Project : Applied Cognitive Science, IITK

1. **Project Description:** In my project, I employed **OCR (Optical Character Recognition)** technology to convert Hindi script images into accurate text with a high conversion rate of **90% to 100%**.
   These OCR-generated results were utilized to develop two readability assessment models for Hindi text.
   The first model **emphasized syllable count and polysyllables**, while the second model incorporated established readability scores like The **Flesch Reading Ease and The Gunning Fog Index**.
   The main objective was to **enhance accessibility** and offer valuable insights for educators and users in **understanding the complexity of the text**.
2. **Tools & Technologies Used:** Tesseract-OCR, Flesch-Kincaid Grade, python libraries (indicnlp, pandas, numpy, langid)

Self Projects

•Book review in AR using vuforia cloud database *GitHub Link for project*

1. **Project Description:** The "**Book Review in AR**" app will first **scan the cover of a book**, fetch the book's information from the **Vuforia cloud database** and display that information inside an information panel.
   So, even before opening the book, the user will get a small idea of the contents of the book and whether this book is ideal for him or not.
2. **Tools & Technologies Used:** Unity 3D | C# | Vuforia cloud database

•Predict success of a restaurant using using Machine learning *GitHub Link for project*

1. **Project Description:** Performed **in-depth analysis** of the data including reviews, **best budget**, **geographical analysis**, analysis of **customer behavior** using WordCloud. Performed **feature importance** and **feature encoding** on data, then performed test and prediction using the above algorithms.
2. **Tools & Technologies Used:** Random Forest | Logistic Regression | Naive Bayes | Decision Tree | KNN

•Predict whether the News is Fake or not *GitHub Link for project*

1. **Project Description:** The project is about developing a **fake news detection solution** using techniques such as **RNNs** and **NLP**. Converting text into data and employing methods like **LSTM**, I aim to predict the authenticity of news. This effort is vital for ensuring **accurate media** and informed business decisions. I'm utilizing **Data Science, TensorFlow 2.0, and deep learning** to address the complexities of modern information.
2. **Tools & Technologies Used:** NLPS-bag of words model | Recurrent Neural Networks (RNNs) | Long Short Term Memory (LSTM) | Naive Bayes - Machine Learning | Data Visualization | Tensorflow 2.0

Technical Skills and Interests

Languages	Python (☆☆☆) Java, C-Sharp, C, CPP (☆☆) R, LaTeX
Developer Tools & Frameworks	React, NodeJs, JQuery, Bootstrap, Express.js, Dfinity, NPM, Github, Tableau, Apache Spark, Agile Scrum, Kanban
Cloud/Databases	Azure Cloud, SQL, MongoDB, Mongoose
Soft Skills	MS Excel (☆☆☆)
BTECH Coursework	Computer Programming in C OOPS through Java Data Structures through CPP Database Management Systems Operating Systems Computer Networks Data Mining Cloud Computing Cryptography and Network Security Scripting Languages
Masters Coursework	CGS602A - Basic Statistics Data Analysis & Inference CGS600A - Computational Tools For Cognitive Science

CERTIFICATIONS

1. Microsoft **Azure** Fundamentals - Wipro Certifications
2. **Machine Learning** Bootcamp Certification - IIT Hyderabad
3. IBM **Data Analyst** Certificate - Coursera
4. The Complete 2023 **Web Development** Bootcamp - Udemy
5. **Agile Project Management** - Udemy
6. **Tensorflow** Certification (for Machine Learning & Neural Networks for Computer Vision, Time Series Analysis) - Udemy
7. **Augmented Reality** Course Certificate - Udemy

Achievements

- **Hackthon** - Smart India Hackthon *March 2019*
- Participated in the Smart India Hackathon 2019 conducted by the Government of India. Our project "Crops and Fertilizers Recommendation System" was selected for the Pre-Finals.

- **Hackthon** - Hack-MIT-WPU *Sep 2021*
- Participated in the Hack-MIT-WPU Hackathon 2021 conducted by MIT World Peace University (MIT-WPU), Pune. Developed the project "College Management Database" and achieved a place among the top 3 finalists.

- **Certificate Of Merit** - Department Topper *2019*
- **Secured 97 percentile in Gate 2022** *2022*