

CHAITANYA KASARANENI

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EDUCATION

M.S., Computer Engineering
San Jose State University

Aug 2018 - Dec 2020

EXPERIENCE

Data Science Intern, Predmatic AI

May 2021 - Jul 2021

- Contributed in creation of Baseline Forecast using SKU data, ensuring information relating to future trends is captured
- Implemented pre-determined metrics and tracking deviations
- Executed integration of Explainable AI (XAI) algorithms for understandability of forecasting predictions
- Co-authored technical white papers for internal project workflows and proof of concepts (PoCs)

Graduate Research Assistant, San Jose State University

Mar 2020 - Dec 2020

- Research on the influence of users online social circles on their recommendations
- Analysis on how altering social ties affects performance of existing trust-based social recommendation algorithms
- Developed web scraping tool in python to download data from social media resulting in enrichment of internal datasets

Software Engineering Intern, Trixon Tech Solutions

Aug 2017 - May 2018

- Enhanced user experience by fine-tuning stored procedures & SQL queries for efficient data retrieval
- Improved company homepage by implementing caching and optimizing static images thereby improving load times

PROJECTS

Master's Thesis - Influence of Social Circles on User Recommendations

- Research on influence of social circles of user and trust propagation on recommendations with hypothesis "Social recommender systems are sensitive to changes in the social network graph"
- Tested the hypothesis on state-of-the-art social recommender systems and experimental results of this research suggest that there is less conclusive evidence on how trust propagation plays a major part in these models
- Link to thesis: https://scholarworks.sjsu.edu/etd_theses/5151/

Disaster Response Pipeline (Python, SQLite, REST APIs)

- Developed an ETL pipeline to collect distress messages originating from social media during a natural disaster to SQLite database and ML pipeline to classify these messages to provide aid to victims
- Deployed a web application, where relief teams can input message that is classified into one of 36 disaster categories, using Heroku at <https://disastermessage-classification.herokuapp.com/>
- Built feature to classify distress messages using RESTful API for easier integration with other applications

Machine Translation of English videos to Regional (Indian) Languages (Python, ffmpeg, Google APIs)

- Created an pipeline that takes an English language video from a user as input, processes given video and generates another video with an audio of desired Indian regional language(s)
- Devised the application by integrating various open source tools such as ffmpeg library, Google Machine Translation API, Flite engine, etc. for data processing and machine translation
- Published detailed model in a paper titled "Machine Translation of English Videos to Indian Regional Languages using Open Innovation" at IEEE International Symposium on Technology and Society (ISTAS). Publication available at: <https://ieeexplore.ieee.org/abstract/document/8937988>

Music Data Warehouse (Python, AWS S3, PostgreSQL, AWS Redshift)

- Developed an ETL pipeline that extracts users and songs data (in JSON format) from Amazon S3, stages it in Amazon Redshift, and transforms it into a set of dimensional tables and a fact table which follow Star Schema
- Link to Project: <https://github.com/chaitanyakasaraneni/dataWarehouse>

SKILLS

Programming Languages: Python, Java, C, C++

Database Technologies: Oracle, MySQL, SQLite, PostgreSQL, SQLAlchemy, Hive, Cassandra

Other Tools & Technologies: HTML, CSS, PHP, JavaScript, REST APIs, Postman, Confluence, D3.js, Auth0, Role-based Access Control (RBAC), Linux, MS Excel, Flask, Scikit-learn, Pandas, Matplotlib, Seaborn, NumPy, Scipy, TensorFlow, Keras, NLTK, PyTorch, Kafka, Spark, Airflow, Tableau, NetworkX, Gluon CV, Docker, Kubernetes, Heroku, Git, CI/CD, Natural Language Processing, Recommender Systems, AWS (Redshift, S3, Lambda, SageMaker, EC2, EMR)

ACHIEVEMENTS

- **Davidson Student Scholar** for AY 2019-20, Charles W. Davidson College of Engineering, San Jose State University
- **Winning Team**, Communication Vertical - Open Innovation Hackathon for development of Smart Villages in India, organized by UC Berkeley and Andhra Pradesh State Government
- Open-source contribution to project **Jarvis**, a command line personal assistant, for displaying system performance
- Published articles in blogs like **KDNuggets**, **Towards Data Science**, and **Analytics Vidhya** with more than 25k reads