

Nithyasri Babu

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WORK EXPERIENCE

Cincinnati Children's Hospital Medical Center (CCHMC), Cincinnati, Ohio

August 2019 – Present

Application Developer – Biomedical Informatics

- Implemented code changes to a Django application that manages & tracks software license distribution
- Django Reports – Reusable **Python-Django** plugin package
 - Launched new plugin to explore application data using distribution charts, filters & export in various format
 - Constructed a **RESTful API** with a hypermedia driven responsive UI using **Bootstrap4, jQuery, and AJAX**
- Firewall Cleanup Automation
 - Automated cleanup process using **Python** scripts that creates reports on expired network objects & rules
 - Upgraded existing firewall management process to update/remove firewall policies based on the reports
- Maintained an application that allows users to request for resources and also manages & tracks resources usage
- Created a website using **Drupal** Content Management System to advertise services provided by the division

TATA Consultancy Services (TCS), Bangalore, India

May 2015 – July 2017

Software Developer – American Express

- Worked with the Credit Authorization System (CAS) - Risk Analysis & Fraud Detection team
- Experienced in low-level programming using TPF (IBM's Assembly Language) and **C++** for faster transactions
- Worked with both Waterfall and Agile Development processes and utilized tools like **JIRA and Confluence**
- Created and maintained test automation tools written in **JAVA & Swing API**; Version control using **BitBucket/git**
- Created design documents with UML diagrams and testing plan (**JUnit**) for each development cycle.
- Optimized existing risk factor calculations with customer transaction history and current transaction data
- Debugged issues in the fraud analysis process identified by running automated batch transaction tests
- **Major Projects**
 - **Quick loan approval** – Pre-approved loan based on customer location, transaction & payment history
 - **Risk and Fraud Alerts** – Push notifications enabled for potential risks based on customer transaction history

EDUCATION

Master's in Computer Science - University of Cincinnati, Cincinnati, Ohio

May 2019

3.7/4.0

Relevant Courses: Advanced Algorithms, Parallel Computing, Database Design, Machine Learning, Data Mining & Analysis

Bachelor's in Information Technology - SASTRA University, India

May 2015

3.3/4.0

Relevant Courses: Data Structures & Algorithms, Linux Shell Programming, Cloud Computing

TECHNICAL SKILLS

Back End Languages: Python (Django/Flask), C++, Java, PHP

Databases: SQL, MySQL, PostgreSQL Oracle PL/SQL

Other Tools: Docker, git version control, Drupal, Selenium

Front End Frameworks: jQuery, React.js, Bootstrap

Cloud & Big Data: AWS, Hadoop, MapReduce, HiveQL

ACADEMIC PROJECTS

Bi-Clustering Analysis- Cheng & Church

MATLAB, D3.js

- Created API to compare & validate clusters using Cheng & Church (CC), Spectral Co-Clustering algorithms
- Identified input parameters for a given dataset using CC algorithm and summarized clustering results using API
- Reported impact of input variations on the results for an algorithm by using D3.js visualizations

Weather Predictions

Python Flask, Pandas, jQuery, REST API, Docker, AWS

- Implemented linear regression on weather dataset to predict temperature for a given input date
- Incorporated third-party OpenWeatherMap API with application plot 5-day weather forecast for input location
- Hosted web application using AWS with AJAX jQuery calls to the RESTful API and visualized using Plotly.js

Author Identification from excerpts using NLP

Python, NLTK Toolkit, Scikit-learn

- Predicted author names from excerpts using artificial neural networks & multinomial Naive Bayes Classifier
- Excerpts processed using tokenization, lemmatization, stemming & transformed using bag of words/TF-IDF
- Laplace smoothening method used with MNB prevent zero probability errors leading to better results

ACHIEVEMENTS

- **Technica 2020 (Oct'20)** – Winner - Best Financial Hack
- **RevolutionUC (Mar'19)** – Finalist, **JPMC Code for Good (Oct'18)** – Finalist