PRITHVIK GOWDA

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EDUCATION

University of Southern California, Los Angeles August 2022 - Present

Master of Science in Electrical Engineering (Machine Learning and Data Science)

Planned Coursework: Probability Theory, Machine Learning I: Supervised Learning, Statistics and Data Analysis, Estimation Theory, Optimization for Information and Data Sciences, Internet and Cloud Computing

RV College of Engineering, Bangalore August 2020

Bachelor of Engineering in Telecommunication Engineering *8.09/10.0*

Relevant Coursework: Programming in C, Data Structures using C++, Operating Systems, Artificial Neural Networks and Deep Learning, Introduction to Web Programming, Cryptography and Network Security

SKILLS

- Programming Languages: Python, Java, C/C++, SQL
- Web Technologies: JavaScript, Angular, Typescript, HTML/CSS
- Framework/Tools: Pandas, NumPy, SciPy, Matplotlib, Scikit-learn, PyTorch, TensorFlow, Spring Boot, REST, MongoDB, Git

WORK EXPERIENCE

NatWest Group, Bangalore September 2020-July 2022

Senior Analyst in Software Engineering, Commercial Banking

- Designed dialogue-flow for NatWest Mobile Banking Application's CORA chatbot using IBM Watson Assistant for Covid-19 related conversational AI journey/skill to help customers and businesses bank online.
- Maintained and continuously developed CORA chatbot's usability with new features and modifications to dialog-flow, debugging through monthly releases to interact with 11 million users.
- Developed data cleaning script for email content classification and data extraction application. Tested the application with different classifier models and increased the accuracy of the application from 67% to 81%.

ACADEMIC PROJECTS

House Price Prediction Spring 2021

- Developed a machine learning model to predict house prices using a dataset containing house descriptions such as lot area, neighborhood, year built, etc.
- Tested the model with multiple algorithms using the Scikit-learn library and achieved a mean absolute error of ~$17000.

FoodSpace Summer 2020

- Built a single page application with APIs by food delivery app 'Zomato' capable of displaying restaurants nearby, trending restaurants and manage a list of favorites for a user. Completed the 3-month training program for full-stack application development from StackRoute (an NIIT initiative).

A Two-Layer Audio Encryption System using Quaternion Transform and Image as a Variable Key Spring 2020

- Developed a secure novel encryption/decryption technique for audio signals and achieved an efficiency of ~88% similarity in encrypted and decrypted audio signals.

Chatbot/Virtual Assistant Fall 2020

- Built a chatbot with Python library "Chatterbot" with set a of conversation data in a CSV file. Extended the functionality using google text-to-speech (gtts) library to listen to speech input and produce appropriate speech responses.

CERTIFICATIONS

MTA: Introduction to Programming Using Python, Microsoft September 2018

- Programmed Raspberry Pi boards with IR sensors to count humans or cars entering a gate and automated switches to activate at a set time along with other experiments.
- Coursework included – Data Types & Operators, Control Flow with decisions and loops, Input/Output Operations, Troubleshooting & error handling, Operations using modules and tools.

Core Java Training, InternShala July 2018

- Developed 'Connect 4' game with JavaFX as a final project of the course along with Java Applets like temperature unit converter and other practice coding questions and passed the final exam with a score of 89%.
- Coursework included – Object Oriented Programming in Java, Core Java, Inner & Abstract Classes, Interfaces, Generics, Collections, JavaFX, Unit Testing, and Micro Services.

Python 3 Bootcamp June 2019

- Developed a web scraper program to crawl websites and gather data along with solving many practice coding questions.
- Coursework included – Data structures in Python (Lists, Dictionaries, Sets, Tuples), Lambdas, Object, Oriented Programming, Iterators, Decorators, and Web Scraping.

PUBLICATIONS

- Prithvik H C, Naman Jain and Rakesh K R, "A Two-Layer Audio Encryption System using Quaternion Transform and Image as a Variable Key", *Wutan Huatan Jisuan Jishu Journal*, ISSN NO: 1001 1749, Vol. 16, Issue 05, pp. 477-487, May 2020. (See Paper)
- Prithvik H C, Naman Jain, Rakesh K R, "Honey Encryption Algorithm to Safeguard Against Brute Force Attack", *International Journal of Engineering Technology Research & Management,* ISSN NO: 2456 9348, Vol. 04, Issue 05, pp. 7-10, May 2020. (See Paper)
- Prithvik H C, Charan K R, Sachin B S and Rakesh K R, "Implementation of Quantum Key Distribution using Python", *Wutan Huatan Jisuan Jishu Journal,* ISSN NO: 1001 1749, Vol. 16, Issue 07, pp. 190-196, July 2020. (See Paper)