SURYA KRISHNAMURTHY

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EDUCATION

Northeastern University, Boston

Sep 2022 - May 2024

GPA: 4/4

Master of Science, Computer Science

June 2016 - May 2020

Vellore Institute of Technology, Vellore Bachelor of Technology, Information Technology

GPA: 8.6/10

TECHNICAL STRENGTHS

Computer Languages

Python, R, C/C++, JS, SQL, NoSQL

Software & Tools

Scikit-learn, PyTorch, Tensorflow, Huggingface, Langchain, Spark

RESEARCH

Using Artificial Intelligence-based models to predict the risk of Mucormycosis among COVID-19 Survivors: An Experience from a public hospital in India.

December 2021

Journal of Infection

· To the best of our knowledge, this is the first study to develop a machine learning model to predict the risk of mucormycosis among COVID-19 survivors. Model achieves an AUROC of 0.95.

Machine Learning Prediction Models for Chronic Kidney Disease Using National Health
Insurance Claim Data in Taiwan

May 2021

Healthcare

· Prediction of Chronic Kidney Disease risk from diagnosis and medication history using machine (deep) learning approaches. Our temporal deep learning model achieves an AUROC of 0.95

Deep Learning for Short Answer Scoring

March 2019

International Journal of Recent Technology and Engineering

· Using Deep Learning for the task of automated scoring of short descriptive answers. Our BERT model achieves a mean QWK score of 0.71.

EXPERIENCE

Northeastern University, Boston

Dec 2022 - Current

Graduate Research Assistant

· Assisting Dr. Shawn Bhimani in the supply chain datahub project with identifying forced labour in supply chain data

Fidelity Investments (FCAT), Boston

June 2023 - Aug 2023

Incoming Data Science Intern

· Enhanced the accuracy of langehain pipelines for LLMs on document question answering by 7%

Associate Data Scientist

- \cdot Lead a team of 5 data scientists in the development of an AutoML platform and conducting research on efficient and interpretable ML
- · Implemented a graphical ML pipelining library inspired by kedro to facilitate model building and autoML
- · Remodeled an automatic electrical appliance and improved its performance accuracy by 20% and efficiency by 30%
- · Prototyped a route and schedule optimization system for waste management to reduce costs by 15%
- \cdot Improved our OCR system for processing forms by 6% with manual feature extraction, character level deep networks, and tesseract
- Designed and developed recommendation engine for an education institute based on Holland codes, and previous learning pathways
- · Analyzed data to develop forecasting models for a large Indian retailer with 340+ stores

Taipei Medical University, Taiwan

May 2019 - June 2019

Research Intern

- · Developed machine learning and deep learning models to predict Chronic Kidney Disease risk from diagnosis and medication history under the TEEP AsiaPlus Program. Constructed neural networks achieve an AUROC of 95.7
- · Experimented with clinical text records for family history extraction
- · Prototyped classical and deep-learning approaches with 80% accuracy for survival analysis with actigraphy data

Skcript, Chennai

June 2018 - June 2018

 $AI\ Intern$

- \cdot Leveraged web-mining to build light-weight emotion detection model with performance comparable to commercial solutions and 50% more efficiency
- \cdot Developed a deep-learning based regional fashion type detection model with 85% accuracy from scraped google images
- · Published a case-study on PlayStation E3 by analyzing and visualizing tweets

ACHIEVEMENTS

Special Student Achievers Award VIT, 2018-2019

Winner of AngelHack Agora challenge Bangalore and Agora RTC Beijing, 2018

Winner of Juspay HyperHack IITM Shaastra, 2018

Winner of CodeSpace hackathon VIT, 2018

Finalists in Global Conference on Advances in Science, Technology and Management (GCASTM) VIT, 2017

RELEVANT COURSES

Related Courses

Machine Learning
Data Mining Techniques
Artificial intelligence
Natural Language Processing
Big Data Analytics

Other Courses

Statistics for Engineering Applied Linear Algebra Transformation Techniques Calculus for Engineers Digital Image Processing

CERTIFICATIONS

Udacity Machine Learning Advanced Nanodegree

NPTEL Data Science for Engineers (Top 1%)

Coursera - Deep Learning Specialization

Coursera - Machine Learning

Microsoft Technology Associate for Introduction to Programming Using Python

STUDENT ACTIVITIES

Google Developer Student Club, NEU

Technical Lead

Oct 2020 - Current $NEU\ Boston$

· Hosted a workshop on "Introduction to Machine Learning" and assisted with the recruitment drive

Google Developer Groups, VIT

Technical Member

Feb 2017 - May 2019 VIT Vellore

- · Worked on several projects based on Machine Learning and Back-end Web Development
- · Conducted a workshop on Computer Vision. Devised introductory hands-on tutorials for participants through Google Colaboratory which was also made public
- · Taught basic Python for beginners on our weekly workshops
- · Won 4 hackathons with other technical members in the chapter

RELEVANT PROJECTS

ProtoIE – Few-shot learning for information extraction in visual documents with prototypical networks

mlgauge – ML benchmarking library based on pmlb and openml

vityBot – A personal assistant for students in VIT university based on NLP to improve productivity

Neural Style Transfer implementation in keras

unSting – disaster recovery and management platform based on autonomous drones powered by computer vision and RTC

MediKit – Improved data-centric healthcare system powered by IoT and ML

FaceRec Security System powered by IoT and ML

Intrusion Detection System based on Machine Learning

WiFi Rover – Robot to traverse rugged terrains controlled with gamepad

Pneumonia detection through image enhancement and feature extraction