

Jay Sinha

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📄 Publications

Efficient Deep CNN-BiLSTM Model for Network Intrusion Detection

3rd International Conference on Artificial Intelligence and Pattern Recognition

June 2020

Xiamen, China

- The model proposes an effective approach towards Network Intrusion Detection in cloud systems with active monitoring using Neural Networks. The proposed model combines spatial and temporal feature sets from CNN and BiLSTM on time range datasets to accurately predict network attacks and the category of attack to which they belong to.

PhishX: An Efficient Approach to Phishing Detection

July 2021

- Proposed a new dataset with 198 features and provided detailed analysis on effectively detecting phishing websites by training models (Classifiers and Neural Networks) on a combination of 73,000 phishing websites with 52,000 top Alexa websites. Random Forest gives an accuracy of 93.09%

📁 Experience

JPMorgan Chase & Co.

Applied AI/ML Associate

July 2019 – Present

Bengaluru, India

- Now working in Commercial Banking as part of the Applied AI/ML Initiative: I work on experimental PoCs with Data Scientists using JPMC's private datasets and take them to production with an end-to-end pipeline utilising AWS with Terraform for infrastructure provision, Apache Airflow to schedule workflows and plugging in all logging feeds to a Graphana Dashboard for monitoring.
- My present role helps identify potential clients and push more sophisticated financial products to existing clients, thereby generating more business within the Commercial Banking division.
- Technologies used: Python, Apache Airflow, ElasticSearch, PySpark, Terraform, AWS: [EMR, SageMaker, Glue, Lambda, Redshift, Step Functions, Data Dog], Graphana.

Software Engineer II

Bengaluru, India

- Previously (as a Software Engineer) : Part of the Corporate Technology Line of Business. Worked on web applications that serve Region Wise different functional and validation sets for Compliance and Operations relating to Timekeeping and Internal Communication Email Engines that reduces Service Delivery Operations Time in half.
- Worked as a Full Stack Developer, technologies used for development & CI/CD: Java, JUnit, Spring MVC, Spring Security, ReactJS, AngularJS, Typescript, CloudFoundry, Jenkins.
- Collaborated with different teams around the globe to onboard Oracle HCM Cloud to JPMC which is now serving more than 250,000 employees and contractors globally.

Helix Accelerator

Trainee

February 2019 – April 2019

Hong Kong SAR

- Was a part of the [Helix Accelerator](#) training program to incubate my project on Hedera Hashgraph which is the only Accelerator on Hedera Hashgraph. Developed HopOn application: a peer-to-peer WiFi sharing dapp monetized by microtransactions of cryptocurrencies. The application uses a dedicated mechanism to stop connecting to other persons' Hopon Hotspot and verify the private keys of users to facilitate transactions through crypto.

Inversion Consultancy LLP

Head of IT

February 2018 – February 2019

Bengaluru, India

- › Developed web-based and app-based software(s) for the company's HR and its clients'.
- › Learning about the startup ecosystem in India and about optimizing web-based software(s) for better performance delivery.
- › Single-handedly designed and developed [Foxmula](#) - An online self-paced learning website for college students and working professionals in India. The web app is made using microservices: consists of an admin (track and visualize the student's actions segregate data in a manner to boost sales and maintain onboarded students), operations student side views and also offers REST API for vendor applications for better tracking of a student and their registration with Foxmula's partners. The website has more than 3000 daily active users and more than 100,000+ signed up users as of now. Created in node.js, React and MongoDB

Ramaiah Public Policy Center

Software Engineering Intern

May 2018 – July 2018

Bengaluru, India

- › Extended the development of Ramaiah Farming Portal (initially started as part of 6th-semester coursework) which is a Data storage software for storing information of farmers covering a complex collection of details for Ramaiah Public Policy Center as a mini-project. (Fully functional & in-production - later taken into the internal organization server in order to limit access to data that contains personally identifiable information)
- › Implemented an unsupervised Machine Learning model to group farmers on basis of the highest growth potential which ultimately helped farmers income and allowed to them to effectively manage their crops end-to-end.

SecureIT Lab

Software Engineering Intern

September 2017 – February 2018

Bengaluru, India

- › Lead the development team of project [Ophish](#).
- › Developed features and did extensive debugging of their platform on PHP and Python which resulted in up to 50% better performance in email scheduling and parallel processing of response events.
- › Implemented a vulnerability predictor ML model that rates the likelihood of a phishing email recipient to be duped. This helped provide better analytics and suggested employee trainings to prevent business impact due to cybersecurity compromise.

Education

MS Ramaiah Institute of Technology

B.E. Information Science and Engineering, 9.26 CGPA

2015 – 2019

Bengaluru, India

Achievements

Hedera'18 Hackathon

First Prize

October 2018

10,000 USD

- › Won Hedera Hashgraph Hackathon (Indian Regional Winners) by creating an internet-sharing platform [HopOn](#) using Hedera's Micro-transaction technology.

Game Oasis Decentralized Hackathon

First Prize

October 2019

200 USD

- › Won Game Oasis Decentralized Hackathon with First Prize - Used Marlin Protocol's SDK to make glitch-free streaming of a 1-D game

Mylan Hackathon

Second Prize

October 2018

350 USD

- > . Developed an offline-capable adverse drug reaction reporting system to ensure a better log of side-effects of medicines in-market

PAYSE Ethical Hacking Hackathon

Second Prize

April 2017

150 USD

- > Finished with Second Position by finding a bug in the PaySE offline payment platform with a Man-in-the-Middle attack.

Projects

AlterOpt

First Prize

May 2019

MSRIT Pradarshana 2019

- > Free omnichannel software for HRMS, Project Management System with built-in external integrations for famous apps used worldwide to manage clients, projects, and employees hassle-free. Won First Place in Open Project Exhibition hosted by MSRIT for Final Year Students' Project

HRI RTA App

Ramaiah Hospital

July 2018 - October 2018

- > Developed HRI RTA App (in-use on Hospital's Internal Devices) - Website App for immediate reporting of Accident Patients being admitted into Ramaiah Memorial Group of Hospitals that is currently in production.

Volunteer Work

Sahapedia 2.0

Sahapedia

November 2019 - August 2020

JPMorgan's Force for Good

- Volunteered as part of JPMC's Force for Good, a Corporate Social Responsibility program at the firm. With a team of 6 people, I worked to revamp [Sahapedia](#) NGO's legacy web platform. Worked on improving their media library and make it into a media browser with a custom-developed npm module on ReactJS.

Certifications

Machine Learning

Coursera

October 2017 - November 2017

Stanford University

Natural Language Processing Specialization

Coursera

March 2021 - September 2021

deeplearning.ai

Deep Learning Specialization

Coursera

February 2021 - December 2021

deeplearning.ai

Introduction to Machine Learning in Production

Coursera

November 2021 - December 2021

deeplearning.ai

The Web Developer Bootcamp

Udemy

March 2017 - April 2017

Java Enterprise Apps with DevOps

NIIT Education

August 2016 - January 2017

Introduction to Computer Science and Programming using Python

edX

August 2016 - October 2016