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SUDHARSANA K J L

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EDUCATION

B.Tech in Computer Science, National Institute of Technology, Tiruchirappalli, India	May 2019
Relevant Courses: Data Structures, Advanced Cryptography, Calculus, Probability Theory, NLP, AI, Pattern Recognition	8.53/10
Maharishi Vidya Mandir Senior Secondary School	May 2014
Affiliated with Central Board of Secondary Education	94.6%

RESEARCH AND DEVELOPMENT EXPERIENCE

Morgan Stanley
August 2019 - Present

Senior Technology Associate (January 2021 - present)
Technology Associate (August 2019 - January 2021)

- Increased the reliability of deployment pipeline by load balancing and contributed to the strategic renovation of tax platform.
- Introduced Spark to source data for 1042-S & 1099 form generation of Wealth Management and Institutional Securities clients.
- Interned from May 2018 - July 2018 and built a backup system on their data lake platform using Hadoop.

Google Summer of Code
May 2019 - August 2020

Mentor and Student Developer

- Contributed to Data Flow Facilitator for Machine Learning by Intel under the organization Python Software Foundation.
- Implemented a workflow for multiple sourcing of data such as Gzip files, Hadoop, and training them on different models.
- Enhanced the core orchestrator through parallelization techniques and improved the efficiency of data flow by 1.5 times.

Indian Institute of Technology, Madras
May 2019 - August 2019

Guide: Prof. Dr. C. Pandu Rangan, Dept. of Computer Science, IIT-Madras
Cryptography Research Intern

- Analyzed Proxy Re-Encryption systems and focused on Identity based PRE schemes.
- Investigated encryption schemes for security attacks and explored proving techniques to showcase them.
- Identified an attack in Pairing free and implicit certificate based signcryption scheme with proxy re-encryption for cloud storage.

Spider R&D, NIT Trichy
August 2016 - May 2019

Research & Web Development

- Member of research group on Cryptography and Artificial Intelligence.
- Mentored students and led the team for four hackathons. Participated in Capture The Flag and Cybersecurity contests.
- Led campus development initiatives and women coders support group. Taught at web development workshops.

AAIWay Inc.
January 2019 - March 2019

Software Developer Intern

- Built the blockchain based one-time authentication module for the drivers of SabkaDriver App
- This app aids senior citizens and patients to book ride share services with support for special needs such as Wheel Chair, Oxygen Cylinders, etc.
- Contributed to the Drive Module built using Google APIs and Geolocation services to fetch the nearest cab ride available.

Sportscafe
December 2016

Software Developer Intern

- Worked on a personal feed feature in their Android App and setup a backup system along with an email service for their writers.
- Implemented a pattern matching algorithm to include hyperlinks in the blog articles.

TECHNICAL SKILLS

- **Advanced:** Python, Java, C++, Solidity, Angular, Django, Spring, MySQL
- **Intermediate:** Shell, Docker, Hadoop, NodeJS, Javascript, HTML, CSS, PHP
- **Familiar:** KDB+/Q, Tensorflow, PyTorch, Hive, Scala, Spark, C, Android, GoLang, PostgreSQL, MongoDB

PUBLICATIONS

- **Criminal Smart Contract for Private Key Theft in End to End Encrypted Applications**
  *Priyanka Pal, **Sudharsana K J L**, Rohith Balaji S*
  Published in 15th International Conference on Information Systems Security in December 2019. An extension of my Final year thesis on usage of smart contracts to build criminal applications and on how exploiting such vulnerabilities could aid in preventing them in future.

PROJECTS

AI based Server Log Maintenance System   March 2019

- A smart server log maintenance system that uses AI to classify and label it with a priority tag and stored in blockchain system to prevent immutability and single point of failure. It detects if the system is under cyber attack and alerts the authorities. This won **first place** at the **Smart India Hackathon 2019** for this problem statement issued by GAIL India Ltd.

OD Approval System   December, 2018 - February, 2019

- Led a team of developers and built a system for automating the process of on-duty form approval as a part of Campus Development Initiative. Implemented multiple level of approvals - student, faculty advisor of a program, Head of Department and Dean, Student Welfare. This is still in use by the student and faculty community at NIT Trichy.

Email Categorisation using Topic Modeling   December 2018 - January 2019

- Under the guidance of **Prof. Dr. Rajeswari Sridhar**, on investigating Long Short-Term Memory network, Support Vector Machines and Term Frequency-Inverse Document Frequency along with K-means clustering algorithm, a model was proposed to categorise the emails.

Distributed Decentralised Blockchain System using Hadoop   January 2019 - October 2019

- A decentralised blockchain system that can be distributed to multiple nodes on Hadoop clusters was built as a part of **Genesis Hackathon**, 2019 conducted by International Blockchain Congress. We built a system for cheaper and reliable data storage on the blockchain, without any extra charges for transactions or smart contract execution.

Churn Prediction in Consumer Industries   January 2017 - February 2017

- Analysed existing techniques for Churn Prediction using regression, under the guidance of **Prof. Dr. E. Sivasankar** and improved a Random Forest based approach with better accuracy. Proposed and Implemented the Neural-Network model with churn data in the telecommunications industry.

CheerBot - A chat bot using sentiment analysis   December 2016

- A Chat bot built using speech recognition through recurrent neural networks to perform keyword extraction and sentiment analysis done using IBM Watson API to predict suicidal thoughts and act as a companion. This won **first place** at **Pragyan Hackathon**, 2016.

POSITION OF RESPONSIBILITY

- **Campus Placement Coordinator, NIT-Trichy**: Responsible for Training and Placements of undergraduate students.
- **Member, Spider R&D Club**: Participated in research groups and led a team of developers in campus development initiatives.
- **Member of Technical Council, Pragyan, NIT-Trichy**: Set up VR games and introduced Human Library to the campus.
- **Marketing Manager & Program Organizer, TEDxNITTrichy**: Worked on Branding and sponsorship and audience experience.
- **U & I Organisation**: Taught children below 6 years of age and involved in Child Enhancement Program to improve their skills.
- **Coordinator at National Service Scheme, NIT-Trichy**: Conducted a drive to educate kids on cleanliness, safety and hygiene.
- **Akshaya Patra Foundation**: Volunteered to aid in cooking to distribute free meals to underprivileged school kids in Bangalore.