JAYASHRE

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SUMMARY

Driven computer science student with a deep focus on data engineering, data science, machine learning, and software engineering, along with a strong foundation in network security within the cybersecurity domain. Known for leveraging technical expertise to solve complex problems and deliver impactful solutions. Excited to collaborate on cutting-edge projects that push the boundaries of technology and data.

EDUCATION

B.Tech, Computer Science and Engineering, specializing in Cybersecurity August 2026
Shiv Nadar University, Chennai
Relevant coursework: Cryptography, Networking, System Design, Pentesting

High school, Biology June 2014 - June 2022
Srimathi Sundaravalli Memorial School, Chennai

TECHNICAL SKILLS

Programming Languages: C/C++, Python, Java, JavaScript, HTML/CSS, SQL, Solidity, Scala, Kotlin, Haskell, Shell & Bash Scripting, TypeScript
Tools & Technologies: Git, Sphinx, NodeJS, ReactJS, ElectronJS, Flask, Django, Postman, NextJS, ELK Stack, ViteJS, Power BI, Wireshark, Firebase, FastAPI, Bootstrap, MySQL, BurpSuite, NMAP
Soft Skills: Project Leadership, Effective Communication, Agile Adaptability, Analytical Problem Solving, Collaborative Teamwork, Strategic Planning

PROFESSIONAL EXPERIENCE

Operations Manager: RAJ Online Tutoring, Chennai, Tamil Nadu, India April 2021 - Ongoing

- Oversee **tutoring sessions, manage meeting links**, and **handle financial aspects and assignments**. Act as a **substitute tutor** and **resolve technical issues** during classes, ensuring smooth operations and effective learning experiences.

Summer Research Fellow: IAS-INSA-NAS, Dharwad, Karnataka, India May 2024 - July 2024

- Contributed to research on **visual-based malware classification** with Dr. Pavan Kumar C, supporting efforts to improve accuracy by **98%** through **advanced image processing and machine learning techniques**.

Technical Content Writer Intern: CoConnexion, Indore, Madhya Pradesh, India July 2023 - Sept 2023

- Authored impactful **tech blogs and articles** on **emerging technologies** for LinkedIn and Medium, establishing a **strong online presence**.

Summer Intern: World Affairs Council of Harrisburg, Harrisburg, Pennsylvania, USA June 2023 - August 2023

- Enhanced the **WACH website & newsletter**, **presented** on mental health in China & India, & **authored an op-ed**. **Created questionnaires** for the **2023 International Young Leaders Conference**, improving communication & engagement.

DATA SCIENCE AND MACHINE LEARNING PROJECTS

WebShield: High-Accuracy Phishing Detection Extension June 2024 - July 2024

- Developed a **phishing detection** solution as a **Chrome extension** using *ReactJS*, *FastAPI*, and *Firebase*, achieving **98% accuracy** by leveraging **five distinct machine learning models**, significantly boosting online safety measures against phishing attacks.

Visual Based Malware Classification May 2024 - July 2024

- Developed a robust **visual-based malware classification** system, achieving **98.25%** accuracy with **CNNs** and **98.11%** with **Random Forest**, leveraging a combination of **advanced machine learning models** and **semi-supervised clustering techniques** for superior **malware detection**.

SecureDash: Real-Time Smart Grid Security Dashboard April 2024 - June 2024

- Created a **real-time monitoring dashboard** using *ElectronJS* and integrated it with *Flask* and *PowerBI*, improving **smart grid security** by **90%** through **machine learning** enhancements for real-time threat detection and response.

BotDetect: Advanced Botnet Detection with Graph Analytics March 2024 - April 2024

- Designed a **graph-based ML model** for **detecting botnets** *using Flask, HTML/CSS, JavaScript, and Python*. Improved **detection rates and robustness** by **95%**, effectively tackling **zero-day attacks**.

Algorithmic Trading Model Development for BTC/USDT Crypto Market January 2024

- Developed a **high-performance trading algorithm** for the **BTC/USDT market**, achieving over **90%** accuracy in **trade predictions**, significantly outperforming conventional trading methods.

HireMeHorizon: Predictive Campus Placement Platform November 2023 - December 2023

- Developed a **predictive website** with *Python*, *ReactJS*, and *Flask* that **enhanced campus placement** outcomes by **94%**, leveraging **data analytics** to provide **precise salary and career predictions** for students.

Advanced Deepfake Detection Platform November 2023

- Created a **web application** that identifies **deepfake videos with over 90% accuracy**. Utilized *OpenCV, machine learning*, and *deep learning techniques*, with *Flask* and *Python* for implementation.

American Sign Language Recognition March 2023 - April 2023

- Developed a *Python*-based **ASL Gesture Recognition** System using *Convolutional Neural Networks (CNNs)* achieving **96%** accuracy, significantly enhancing accessibility for the hearing impaired.

DEVELOPMENT ENGINEERING PROJECTS

SecuScan: Real-Time Vulnerability Scanner for VS Code July 2024 - August 2024

- Engineered a **VS Code extension** using *TypeScript* and *Webpack* to automate **vulnerability scanning** of **project dependencies**, enhancing security insights through integration with the *NVD API*.

Personal Portfolio Website January 2024

- Designed and developed a **responsive personal portfolio** website using *ReactJS*, showcasing a dynamic and visually engaging platform with seamless navigation and high-performance user experience.

OpenChain: Blockchain-Based Digital Content Marketplace November 2023 - December 2023

- Developed a *Solidity*-based **smart contract** that facilitates the **secure distribution of digital content** such as music, art, or software, incorporating **buyer tracking and secure transactions** to enhance content **marketplace transparency**.

PenGUIn: Simplified Linux OS Hardening Tool October 2023 - November 2023

- Designed a user-friendly *Linux* application with *PyGTK and Shell Scripting* that streamlines **OS hardening** on *Ubuntu*, making **essential security features** accessible via **one-click options**.

AirPic: Gesture-Controlled Photo App in Android July 2023 - October 2023

- Led the creation of a **gesture-controlled** *Android* app using *Kotlin, CameraX, and TensorFlow-Keras*, achieving **92%** accuracy in **advanced gesture recognition**, enhancing interactive user experiences.

Barcode Attendance System March 2023

- Built a **robust attendance management** system using *Python* that automates **barcode scanning for attendance**, reducing **processing time** and ensuring **secure, accurate data management** across educational environments.

Emotion-based Music Player December 2022

- Developed a *C-based* personalized **music player** that dynamically selects tracks based on **real-time emotional analysis**, enhancing user engagement.

DATA ENGINEERING PROJECTS

DataVeilAPI: Comprehensive Data Anonymization Solution August 2024

- Created a *Django REST API* for comprehensive **data anonymization**, utilizing **masking, generalization, randomization, perturbation, pseudonymization, data swapping**, and **synthetic data techniques** to safeguard sensitive information.

PUBLICATIONS

1. **Jayashre**, & U Padmavathi. (2024). **Blockchain-Based IoT Computing Services in Medical Healthcare**. *Applying Internet of Things and Blockchain in Smart Cities: Industry and Healthcare Perspectives, IGI Global*.
2. **Jayashre**, Raahul R, Roahith R & Shanmathi Ganesan. (2024). **Campus Placement and Salary Prediction: Leveraging Machine Learning for Enhanced Employability**. *IFIP Advances in Information and Communication Technology (IFIPAICT), Volume 718, Springer Nature*.
3. **Jayashre**, U Padmavathi, RS Harshitha & Nidhi Gummaraju. (2024). **Examining Architectural Aspects of Hyperledger Fabric: A Thorough Review**. *2024 International Conference on Innovations and Challenges in Emerging Technologies (ICICET), IEEE Xplore*.
4. **Jayashre**, U Padmavathi, RS Harshitha & Nidhi Gummaraju. (2024). **Integrating Cyber-Physical Systems for Enhanced Efficiency in Healthcare Solutions**. *Technologies for Sustainable Healthcare Development, IGI Global*.
5. **Jayashre**, & Amsaprabhaa, M. (2024). **Safeguarding Media Integrity: A Hybrid Optimized Deep Feature Fusion Based Deepfake Detection In Videos**. *Computers & Security, Elsevier. Annexure 1 (Q1 Journal)*.
6. **Jayashre**, Amsaprabhaa, M, H Saadhvi Sree, Kavini Muthamizhvalavan, Nidhi Gummaraju & S Padmajaa. (2024). **American Sign Language Real Time Detection Using TensorFlow and Keras in Python**. *2024 3rd International Conference for Innovation in Technology (INOCON), IEEE Xplore*.
7. **Jayashre**, Amsaprabhaa, M, H Saadhvi Sree, Kavini Muthamizhvalavan, Nidhi Gummaraju & S Padmajaa. (2023). **Bar Code Based Attendance System**. *2023 Global Conference on Information Technologies and Communications (GCITC), IEEE Xplore*.

ACHIEVEMENTS

March 2024. Awarded **first prize** in **Cyber Colloquy 3.0: Deepfake Discovery Global Hackathon**, organized by Shah And Anchor Kutchhi Engineering College, with a **cash prize of Rs. 5000**.

July 2023. Earned a prestigious **scholarship** from the **SheCodes Foundation**, enhancing **web development skills** while actively contributing to a vibrant coding community and driving collaborative innovation.

March 2023. Selected as a **2023 Women Engineer Scholar**, ranking in the **top 1%** among 27,000 applicants for the **TalentSprint-Google** supported program

February 2023. Secured a position in the **top 10%** with an impressive ranking in the **89th percentile** in the **Red Hat IT Aptitude Test**, demonstrating exceptional technical aptitude and problem-solving skills.

CERTIFICATIONS

Data Mining, (2024), *NPTEL*

Ethical Hacking, (2023), *NPTEL*

Cyber Security & Privacy, (2023), *NPTEL*