

Arun Ragavendhar

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Career Objective

Motivated and analytical software developer, AI and cybersecurity enthusiast with two years of experience at TCS (India) and 3 months of Australian internship exposure. Skilled in JavaScript, React, Node.js, Python, and full-stack development, machine learning and cybersecurity. Passionate about solving real-world challenges through innovative software. Currently pursuing a Master of IT (Software Development) at Swinburne University, seeking an R&D-focused software development or AI and machine learning internship to contribute to research teams working on AI safety, cybersecurity, and secure system design, especially in areas like LLM defence, anomaly detection, and model alignment.

Technical Skills

Technology	My Expertise
• Java, Spring, Python, Node.js, Express.js	8/10 - Proficient
• MySQL, MongoDB	9/10 - Advanced
• JavaScript, TypeScript, React	8/10 – Proficient
• Linux, shell scripting	8/10 – Proficient
• Git, GitHub	9/10 - Advanced
• AI and Machine Learning, Dataset Curation	8/10 – Proficient
• Gen AI Prompting, LLM Behavioural Analysis	8/10 – Proficient
• AWS and OCI cloud	8/10 – Proficient
• Kali Linux, Volatility, and other Cyber forensic tools	8/10 – Proficient
• Analytical Problem Solver	8/10 - Proficient
• Strong first principles coding fundamentals	9/10 - Advanced
• UI/UX Design (Figma, Wireframing)	8/10 - Proficient

Education

Master's Degree, Information Technology - Grade: 3.875 / 4.0
Swinburne University of Technology, Melbourne

Feb 2024 – Dec 2025

- Software Development Specialisation
- George Swinburne Postgraduate STEM Scholarship holder

Achievements – High distinction (HD) or Distinction (D) grades in all subjects

Bachelor's Degree, Electronics and Communication Engineering
SASTRA deemed University, India

July 2017 – June 2021

LinkedIn Profile

<http://www.linkedin.com/in/arun-ragav>

English Communication Skills

C1 Grade full professional working proficiency in English

IELTS ACADEMIC scores:

Listening: **8.0** | Reading: **8.0** | Writing: **7.0** | Speaking: **7.5** | Overall Band Score: **7.5** | CEFR Level: **C1**

Academic Projects

My GitHub Repository Link:

<https://github.com/Arun-2208>

Memory Forensics Investigation – APT38 Attack Chain Analysis

Mar 2025 – May 2025

Executed a complete memory forensics investigation using Volatility 3 to detect and trace a live APT38-style ransomware attack.

Isolated in-memory batch script execution and SYSTEM-level abuse that bypassed login mechanisms

Uncovered PowerShell-based Defender evasion and confirmed persistence via registry-based auto-runs

Reconstructed attack chain and mapped behaviour to MITRE ATT&CK forensics (T1059, T1110, T1547), highlighting how adversarial activity can occur entirely in memory without visible traces — a critical perspective for LLM prompt abuse scenarios.

Skills: Volatility 3, Memory Carving, MITRE ATT&CK, TTP Analysis, Disk Image Forensics, 7-Zip File Manager

CyberShield AI – Hybrid Malware Detection System

Mar 2025 – May 2025

Designed and implemented a three-tier AI-driven web application to detect and classify obfuscated malware.

Developed a hybrid ML pipeline using Autoencoder for anomaly detection and Random Forest for malware classification (binary + multi-class).

Built the backend with Flask and SQLAlchemy, frontend with Vue.js and Tailwind CSS, and integrated MySQL for persistent storage.

Added features like scan logs, admin retraining panel, anomaly scoring, future risk predictor, and detailed PDF reporting.

Analysed how models behave with noisy inputs to improve alignment.

Skills: Vue.js, Flask, MySQL, ML (Autoencoder, RF), REST API, Full-stack

AWS-Based Cloud Photo Album Deployment

Mar 2025 – May 2025

Architected and deployed a secure photo album web app using AWS cloud-native infrastructure and best practices.

Created isolated VPC with custom subnets, route tables, and IGW for secure network segmentation

Launched EC2 instances with LAMP stack, integrated RDS (MySQL) for metadata, and used S3 for scalable storage

Configured and tested site-to-site VPN to enable secure communication between internal systems and remote networks.

Diagnosed and resolved NACL/security group misconfigurations by applying knowledge of ephemeral port ranges

Skills: AWS VPC, EC2, S3, RDS, IAM, Apache, VPN, Linux Networking, Cloud Security

Car Purchase Recommendation System Using Deep Learning Neural Network model

Aug 2024 – Nov 2024

Built an AI-driven car recommendation system using TensorFlow MLP Neural Networks (*90.86% accuracy*).

Interactive Streamlit UI for personalised recommendations based on budget, fuel efficiency, and safety.

Processed 10,000+ dataset records with advanced data engineering techniques.

Skills: Python, Streamlit, Deep Learning, TensorFlow, Neural Networks

Ecommerce Application - Integrated Online Shopping and Shipping

Aug 2024 – Nov 2024

Developed a scalable, full-stack e-commerce platform with admin-controlled shipping & order processing.

Used SQL + XML for data storage and XSLT templates for secure data processing.

Skills: PHP, JavaScript, AJAX, XML, XSLT

TrackCare Wandering Detection Prototype

Aug 2024 – Nov 2024

[Figma Prototype Link](#)

Figma prototype for monitoring dementia patients with GPS tracking, emergency tools, and health monitoring.

Conducted usability testing to refine the interface.

Skills: Figma, UX/UI Design, Usability Testing

Licenses and Certifications

BSBOPS201 - Professional work experience in an Australian Business Environment

Completed a 12 Week Internship as a Full Stack Software Developer at Mojo Dojo, Pvt.Ltd to gain Australian work experience.

Employment History

Software Developer Intern

Nov 2024 – Feb 2025

Mojo Dojo, Melbourne, Australia

- Developed a custom Date Picker, with custom selections, dynamic highlighting and featured presets.
- Performed website troubleshooting & maintenance, optimizing performance and uptime.
- Developed custom routed functional web pages on an under-development usage analytics website.
- Conducted data analysis on client website usage and traffic, providing actionable insights for business decisions.
- Impact: Improved reliability, enhanced user experience, and optimized decision-making.
- Skills: React.js, Full-Stack Development, Software Testing, Data Analysis

Software Developer

Jul 2021 – Aug 2023

TATA Consultancy Services, Chennai, India

- Consultant for ROGERS Canada, developing RESTful APIs with Spring, boosting data efficiency by 30%.
- Optimised backend systems for Rogers.com, enhancing performance by 20%.
- Resolved 90%+ production bugs on the first attempt, cutting downtime significantly.
- Impact: Improved scalability (+25%) and reduced incident response time (-40%).
- Skills: Java, Spring, JPA, Hibernate, REST APIs, Debugging, Problem-Solving

Personal Attributes

Adaptability: Quick learner, adaptable and open to feedback.

Analytical Thinking: Strong problem-solver with first-principles approach and abstract thinking.

Collaboration: Team player, open to sharing knowledge and ideas.

Australian References

Christopher Opie – Software Engineer – Commonwealth Bank of Australia

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