

# SHARATH S T

+61 485 540 750, stsharath13@gmail.com, <https://linkedin.com/in/sharath-s-t-362b89279>

## PROFESSIONAL SUMMARY

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Designed and deployed Machine Learning models utilizing YOLOv8, TensorFlow, and scikit-learn.  
Architected scalable web applications leveraging the MERN stack, RESTful APIs, and Tailwind CSS.  
Established technical foundation in computer vision, microservices architecture, and cloud deployments.  
Spearheaded delivery of intelligent, agile solutions from initial concept through to production environments.  
Seeking strategic opportunities in AI-driven web development and cloud-based ML integrations to drive technical innovation.

## EDUCATION

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**Master Of Information Technology** September 2025 - Present  
**University of New South Wales**

- Master of Information Technology (Specialization: Artificial Intelligence & Advanced IT Systems).

**Bachelor of Technology in Information Technology** May 2021 - May 2025  
**PSG College of Technology**

- Bachelor of Technology in Information Technology.
- Graduated First Class.
- Focused on Software Development, Data Structures, Algorithms, and System Design.

## TECHNICAL SKILLS

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Programming Languages: Java | Python | C | JavaScript | TypeScript | SQL (Oracle SQL) | HTML5/CSS3.  
Web Technologies & Frameworks: React.js | Node.js | Express.js | MongoDB | Tailwind CSS | REST APIs.  
AI/ML & Computer Vision: TensorFlow | Keras | Scikit-learn | Pandas | NumPy | OpenCV | YOLOv8 | EasyOCR.  
Tools & Platforms: Git | GitHub | Docker | Firebase | Postman | VS Code | IntelliJ IDEA | Agile Methodologies.

## PROFESSIONAL EXPERIENCE

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**Project Intern** December 2023 - May 2024  
**Full Stack Development (MERN)**

- Engineered and deployed a full-stack web application leveraging React.js, Node.js, Express.js, and MongoDB.
- Architected scalable RESTful APIs, enforcing security through JWT-based authentication and role-based access control (RBAC).
- Directed a cross-functional team to design modular, reusable frontend components aligned with core business requirements.
- Optimized backend queries and API response times, reducing latency by 15% and enhancing system support for 50+ concurrent users.
- Facilitated Agile (Scrum) workflows by participating in daily stand-ups, sprint planning, and retrospective meetings.
- Delivered optimized, production-ready features, guaranteeing cross-browser compatibility and responsiveness.
- Integrated secure middleware, input validation, and advanced error handling protocols to application security.

## TECHNICAL PROJECTS

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**TaskTracker AI** February 2026 - Present  
**Agile Productivity Suite**

- Pioneered product roadmap as Product Owner, managing a backlog of 20+ Agile user stories to deliver a production-ready PWA.

- Integrated Google Gemini 2.5 LLM and the Web Speech API to empower hands-free, natural language CRUD operations and generate automated Epic breakdowns.
- Programmed an interactive Kanban dashboard using Sortable JS and Bootstrap 5, implementing IDOR vulnerability prevention protocols to isolate and secure user data.
- Engineered a Pomodoro focus tracker and orchestrated asynchronous Python background workers to dispatch computerized daily Gmail reminders reliably.
- Developed dynamic search filtering, custom project categorization, and a visual Calendar timeline, augmenting functionality with one-click CSV data exports.
- Directed creation of a technical video presentation to articulate application's architecture and user flow for stakeholder review.

### Smart Parking Guidance System(Deep Learning)

September 2024 - May 2025

#### PSG College Of Technology

- Built an AI-driven smart parking architecture utilizing YOLOv8 to achieve 96% accuracy in vehicle and license plate detection, integrated with EasyOCR for real-time recognition.
- Engineered a network of 9 microservices handling OCR, authentication, API gateways, logging, and recognition to guarantee high availability and modular REST API integration.
- Constructed a secure MERN stack web application styled with Tailwind CSS to provide live slot visualization, status tracking, and computerized QR-based access control.
- Designed an administrative dashboard featuring full CRUD capabilities to seamlessly manage users, slots, logs, and vehicle data in real-time.
- Executed analytical benchmarking of YOLOv8 against ResNet50, MobileNet, and PSO-based models to validate performance under diverse lighting and congestion scenarios.

## PUBLICATIONS AND PRESENTATIONS

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- Patent Pending: Filed a provisional patent for a sensor-less, camera-based Smart Parking System utilizing advanced computer vision and deep learning methodologies (2025).
- Architected a real-time, parking guidance platform eliminates need for physical sensors.
- Designed a scalable, cloud-ready infrastructure optimized for real-time vehicle detection and continuous space monitoring.
- Amplified cost-efficiency and deployment scalability through an innovative AI-driven, sensor-less architectural approach.
- Co-authored an in-depth research review analyzing AI and deep learning models (YOLO, CNNs, GANs) applicable to smart parking ecosystems.
- Analyzed complex IoT-enabled architectures alongside real-time traffic management frameworks.
- Evaluated critical factors including system scalability, data privacy, and distributed system challenges inherent in urban deployments.
- Proposed integration of federated learning and edge AI to achieve secure, ultra-low-latency model inference.

## TRAINING AND CERTIFICATIONS

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Microsoft Python Development Professional Certificate (Coursera).

- Achieved comprehensive certification across all core modules: Python Fundamentals, Data Analysis & Visualization, Web Development, Advanced Python Techniques, and Project Development.

## EXTRA CURRICULAR ACTIVITIES

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- Competed in professional badminton tournaments, cultivating discipline, strategic thinking, and teamwork.
- Mentored 10+ peers in Python development, facilitating 3 hands-on workshops translated theoretical concepts into production-ready code.
- Founded and led weekly peer coding sessions for 10+ students, resulting in an increase in group technical assessment scores.
- Solved over 300 LeetCode problems, strengthening analytical problem-solving abilities and algorithmic thinking.