Hemang Murugan

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SUMMARY

Full-Stack & Mobile Developer with 3+ years experience. Led technical teams and delivered software for 10,000+ deployed devices across 8+ enterprise projects. Specialized in React Js, Angular React Native, Node.js, and MongoDB.

EDUCATION

Northeastern University	**Boston, MA**
Master's in Computer and Information Sciences	**Jan 2025 - Present**
Bannari Amman Institute of Technology, Anna University	**Erode, TN, India**
*Bachelor of Engineering in Computer Science and Engineering	CGPA: 8.49/10*	**Aug 2018 - May 2022**

TECHNICAL SKILLS

Languages: Java, JavaScript, TypeScript, Java, Python, C/C++, HTML, CSS
Frameworks & Libraries: React Native, React.js, Angular, Node.js, Springboot, Express.js, Redux, NgRx
Databases & Cloud: PostgreSQL, MongoDB, MySQL, AWS, Google Cloud, Azure, Firebase
Tools & Technologies: Git, Docker, Kubernetes, TensorFlow, Xcode, REST APIs

WORK EXPERIENCE

Morbium Technologies	**Coimbatore, India**
Lead Software Engineer	**Sep 2022 - Nov 2024**

- Led development of enterprise software solutions for 8+ client projects, managing a team of 3 developers and delivering applications deployed on 10,000+ devices across multiple industries.
- Architected and developed an innovative AI-powered vending machine platform for Cristal Tea using React Native, Node.js, and PostgreSQL. Built dynamic menu system that automatically detects liquid concentrates and creates custom beverage blends using Artificial Intelligence. Developed a predictive inventory system using regional data, weather, and usage trends to optimize supply chain logistics and cut costs.
- Delivered a full-stack solution featuring a React Native HMI, mobile application, and AWS-based backend, for Adisil's smart combination ovens, supporting 300+ deployed units. Designed a cloud-connected IoT platform, enabling remote recipe management and mobile control.

Innotek Automation	**Bangalore, India**
Full-Stack Developer	**Dec 2021 - Sep 2022**

- Developed AI-powered vending machine solutions using React Native and Node.js, integrating IoT for storing machine state and data.
- Built scalable backend systems with MongoDB and Azure, optimizing server performance and reducing infrastructure costs through efficient database design and API optimization.

Hyperwork	**Emden, Germany**
Software Engineer Intern	**Aug 2021 - Nov 2021**

- Designed and developed ReflectSecurity's corporate website using React.js, Node.js, and MongoDB, implementing responsive design principles and modern UI/UX patterns that enhanced user engagement and brand presence.

NOTABLE PROJECTS

GameTales | *React, Node.js, PostgreSQL, OpenAI API, NLP* — **Summer 2025**

- Built AI-powered platform that transforms written stories into interactive video games using natural language processing. Developed custom parsing algorithms and game generation engine that automatically creates playable experiences from narrative text.

Washbot - Hand Wash Monitoring System | *React Native, Computer Vision, AWS SageMaker* **Mar 2019 - Apr 2020**

- Developed WHO-compliant hand hygiene monitoring system using VGG19 image processing and real-time inference. Won first place at MHRD Mega Online Challenge and Smart India Hackathon 2019. Secured $25,000 in funding and received recognition from healthcare institutions.

Amber - AI Safety Wearable | *React Native, NLU, RNN, LoRa Communication* **Sep 2020 - Mar 2021**

- Developed AI-powered wearable device for danger detection using voice analysis and offline SOS alerts via LoRa communication. Achieved 95% accuracy in field testing across rural environments. Filed patent (Application: 202141025203).

ACHIEVEMENTS & RECOGNITION

Competition Awards: First place - MHRD Mega Online Challenge 2020, Smart India Hackathon 2019 — Third place - Hack and Tackle 2.0
Funding & Patents: $25,000 research funding for Washbot project — Patent filed for personal safety device (202141025203)
Certifications: Cyber Security Professional - Lucideus