

Aswin Kumar

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Chennai

Automation Software – R&D Engineer

SUMMARY

I am an experienced Automation and Software Engineer with over 4+ years of experience in core automation, industrial protocols, data analysis, robotics, and AI. I am proficient in DevOps and Agile methodology and have a proven history of delivering high-quality results in fast-paced environments. My expertise in automation and software engineering, coupled with my passion for innovation, makes me an asset to any organization seeking to leverage technology for business success.

EDUCATION

B.E. in Mechatronics Engineering

May '17- Mar '21

Agni college of Technology – Anna University

Secured - 80.3%

KEY DEVELOPMENT PROJECTS

Plugin Development

Tech Stack: Karel, PowerShell, TypeScript, Vue, RoboGuide | Mar 2023 | Chennai, IN

- Developed a Cobot plugin that facilitates communication between welding power sources and Cobot, while also offering improved UI and support for welding parameters.
- Incorporated reinforcement learning to enhance the plugin's results.

Python-Based Benchmarking Tools

Tech Stack: Python, HTML, Flask, TensorFlow, OpenCV, NumPy, Pandas, Matplotlib | Jun 2020

- Developed benchmarking tools for welding using advanced ML models like CNN and UNet++, optimized with GPU clusters and multiprocessing.

DevOps

Tech Stack: Azure DevOps, Docker, Azure ML, Cloud Computing, Git, CI/CD, Pipeline, Artifacts | Mar 2024

- DevOps expert and active Scrum Master, streamlining CI/CD, leading Agile teams, and managing Azure ML workflows.

PROFESSIONAL EXPERIENCE

Automation Software - R&D Engineer

Sep '21 - Present

Lincoln Electric

Chennai, IN

- Drove Cobot plugin software development efforts and commissioned industrial robots including ABB GoFa and Fanuc CRX.
- Built Flask-based Python ML benchmarking tools using TensorFlow and OpenCV, optimized with threading, multiprocessing, and GPU. Automated testing via unit tests, Selenium, and DevOps pipelines.
- Led Azure ML-based cloud automation for Industry 4.0, integrating CI/CD pipelines, DevOps collaboration for seamless deployment & monitoring. Actively served as Scrum Master, driving Agile practices.
- Hands-on experience with 6-axis robots and cobots, from commissioning, communication, programming to core software development

Automation & Control Engineer

Aug '20 - Sep '21

Qtek Mechatronics

Chennai, IN

- Designed and programmed an Automated Guided Vehicle and Multi-Axis Robot for 3D printing, ensuring location precision with Decawave technology.
- Implemented a Pick-To-Light System using I2C, RS232, Profinet, and TCP/IP communication protocols for accurate component picking, enabling efficient tracking and analysis through data logging and report generation.
- Programmed an Auto-Weighing Machine using Siemens S7-1200 PLC and created the front-end in JavaScript with Node-RED for a user-friendly interface, ensuring efficient and precise weighing.

KEY SKILLS

• Software Development • Interface Designing • Data Analytics • Selenium-based RPA Development • Cloud Computing • DevOps.
• PLC & HMI Programming • Industrial Protocols • Robotics • Data Organization & Management • Coding & Troubleshooting

TECHNICAL SKILLS

Programming Languages: Python, Node.js, Node red, C#, TypeScript

Web Design: HTML5, CSS, JavaScript

Servlets/Server Tools: Azure ML, Azure DevOps & pipelines

Database: My SQL, MongoDB

Web/Application Servers: Flask, Google extensions

Industrial Robots: Fanuc - R30id & CRX, ABB - Irc5 & GoFa

Embedded Hardware programming: S7-1200 TIA Portal, Delta HMI, Raspberry PI, Arduino

Industrial Protocols: RS232, RS485, TCP/IP, Ethernet/IP, Profinet, MQTT, FTP

CERTIFICATIONS

- Programming in C | NPTEL
- Arc Tool Handling | Fanuc
- Karel | Fanuc
- MongoDB | Udemy
- Project Management | PMI
- Internet of Things: How did we get here? | "University of California San Diego" offered through Coursera.
- AI For Everyone | deeplearning.ai
- Deep Learning | National Research University Higher School of Economics Coursera

ADDITIONAL INFORMATION

- Languages: Tamil (Native), English (Professional), Malayalam (Medium)
- Interests: Robotics, Space systems, Nano-bots, Music