AJAY GOWDA

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WORK EXPERIENCE

EVBOX **Amsterdam, NL**
Systems Validation Engineer *Sep 2020 - Present*

- Design, develop and execute automated firmware tests to validate system requirements like OCPP and IEC-61851 / ISO-15118 compatibility, happy/unhappy paths, and custom features.
- Develop, deploy and maintain data acquisition infrastructure like databases, visualization tools and vpns on AWS.
- Design and develop one off test setups for unique test scenarios including data acquisition and generating reports.
- Design and develop test benches for correct and repeatable hardware and software validation and verification.
- Assist with pre-compliance testing for certifications such as Energy Star and UL.
- Develop and maintain EOL (End of Line) test applications.

ETERNAL SUN SPIRE **The Hague, NL**
Development and Validation Engineer *Aug 2018 – Jul 2020*

- Troubleshoot issues with prototype and production photovoltaic Test Equipment in Labs and Manufacturing lines.
- Work with customers on development projects which involved fixing critical issues, adding features and tuning prototype machines.
- Design and develop control architecture for photovoltaic test machines to enable optimal performance and data acquisition.

GENERAL MOTORS **Milford, USA**
Hybrid Powertrain Development Engineer *Jan 2016 – Aug 2018*

- Develop efficient powertrains with optimal fuel economy and exceptional performance via work on batteries, motors,hydraulic systems, internal combustion engines, and power electronics.
- Ensure vehicle test fleet is up to date with latest hardware and software.
- Collect and analyse data from vehicles on test tracks, in extreme locations, and state of the art high feature test cells using vehicle monitoring software and hardware.
- Validate new hybrid and electric powertrains subjectively and objectively.
- Ensure vehicle test fleet is up to date with latest hardware and software.
- Construct one-off wiring harnesses that include high voltage and CAN communication loops.

Algorithm Development Engineer – Thermal Controls *Jul 2015 – Jan 2016*

- Develop thermal control system for liquid cooled High Voltage battery systems.

UNIVERSITY OF WASHINGTON **Seattle, USA**
Research Assistant at EcoCAR Laboratory *Oct 2013 – Jun 2015*

- Build, run and assess hybrid powertrain configurations for real world feasibility
- Worked on control logic of the supervisory controller that interlinks the two powertrains. (Electric and Diesel)

EDUCATION

UNIVERSITY OF WASHINGTON **Seattle, USA**
Master of Science in ME, Control Systems *Sept 2013 – May 2015*

- Linear Controls, Digital controls, Optimal Controls
- Master's Thesis - System Level Modeling and Simulation of a Hybrid Vehicle.

MANIPAL INSTITUTE OF TECHNOLOGY **Manipal, India**
Bachelor of Science in Mechatronics Engineering *June 2009 – May 2013*

- Control Theory, Analog and digital circuit design, Embedded Systems, PLC, Hydraulic and Pneumatic systems.

TECHNICAL SKILLS

Languages: Python, MATLAB/ Simulink, JAVA, C/C++, TypeScript, HTML, Structured Text (PLC),YAML, XML, SQL

Technologies: AWS, Big Query, Grafana, Influxdb, Wireguard, Docker, Linux, ARM, GIT, Polarion

Frameworks: FastAPI, Django, pytest, opencv, pymodbus, socketCAN

Automotive industry tools: MDA, INCA, Vehicle Spy, dSPACE, neoVI, High Performance Driver Education from GM

Standards: OCPP 1.6, OCPP 2.0, ISO-15118, IEC-61851, MODBUS, CAN, REST API, Websockets, OPC UA, OBD2, EEBUS