

Melvin “Mel” Malabanan

Software Engineer

☎: 706 – 577 – 6827 | ✉: mmalaban@hotmail.com | 💻: [linkedin/mmalaban](https://www.linkedin.com/in/mmalaban)

Professional Summary

Highly motivated professional with over 10 years of experience in embedded software engineering and 12 years in the automotive industry. Skilled in project management, leadership, team building, customer support, communication, and customer relations. Able to thrive under pressure and meet tight deadlines. Has developed strong skills in managing projects, leading and motivating teams, providing excellent support to customers, effectively communicating with stakeholders, and building positive relationships with clients. Confident to take on new challenges and deliver high-quality results in a fast-paced environment.

Work Experience

Skills	Sr. Software Engineer		
	IAV, Inc., Northville, MI		May 2022 - Now
Project management <i>Software Development Lifecycle</i> <i>Agile / Scrum</i> <i>Mentorship</i> <i>Issue tracking</i>	<ul style="list-style-type: none">Requirements generation for a range of projects, customers and productsSoftware Architecture design for range of projects and customersDesign, implement and test safety related embedded softwareWork closely with the customer to bring up and debug new hardwareSupport architecture design and developmentDevelop software in an ASPICE compliant processDevelop device drivers and middleware for interfaces like CAN, LIN, etc.Review software requirements with the customer (internal & external)Implement software functions based on requirementsParticipate in SW code reviewsCreate SW documentationSupport validation test plan creationExecution of software validation test plansReview test case resultsImplement change based on test cases results and change requestsSupport planning and execution of engineering activities as directed by supervisor or senior team membersSupport customer meetingsSupport business and strategic company development opportunitiesDemonstrate a willingness to learn and build technical knowledge and abilityMaintain ISO required documentation, project diary, open issues list, task management system (i.e. JIRA) for multiple projects		
Embedded Systems / Software <i>Build manager / environment</i> <i>Debugging</i> <i>Unit testing</i> <i>Schematic reading</i> <i>Schematic analysis</i>			
AUTOSAR <i>Basic software configuration</i> <i>Communication stack</i> <i>Diagnostic stack</i> <i>Memory stack</i> <i>MCAL configuration</i>	Sr. Software Engineer I BorgWarner, Inc., Auburn Hills, MI April 2017 – May 2022 <ul style="list-style-type: none">Global software integration lead for new BorgWarner productCreated integration test strategy for software components developed at various technical sitesDeveloped regression test for systemProject involved use of AUTOSAR basic software and various drivers and application software componentsRe-architected the AUTOSAR diagnostic stack for a project that had tight deadlineLead the software cybersecurity team in developmentSite administrator for software configuration management (Bitbucket) at BorgWarnerLed training on Bitbucket usage for all of site employeesProvided support for unique issues with BitbucketSite lead for development of continuous integration/continuous delivery at Auburn Hills locationCollaborating with other technical sites to design a global CI/CD deployment strategy		
Programming Languages <i>C / C++ / C#</i> <i>Python</i> <i>Rust</i> <i>CAPL</i> <i>Make</i>			
SW Configuration Management <i>Git</i> <i>SVN</i> <i>Bitbucket</i> <i>Github</i> <i>SAccurev</i>			
Protocols <i>CAN</i> <i>SPI</i> <i>UART</i> <i>UDS</i> <i>I2C</i>			
Microcontroller <i>Infineon TC2xx / TC3xx</i> <i>TI Tiva C (TM4x)</i> <i>Freescale (MPC56/7xx)</i> <i>Renesas v850/RH850</i> <i>NXP S32K</i> <i>STM32</i>			
Tools <i>VS Code</i> <i>Visual Studio</i> <i>Understand for C++ (Scitool)</i>			

Eclipse
Lauterbach / Trace32
iSystem / WinIdea
JIRA / Redmine
Bitbucket / Github
Accurev
Git
SVN
Confluence
CANalyzer / CANoe
DaVinci Developer
DaVinci Configurator
CANdela Studio

Project

For the capstone project at the University of Michigan - Dearborn, an autonomous lawnmower was created. The robot was designed to navigate a designated area using various sensors, such as GPS and a USB camera, until the area had been mowed. It would avoid any obstacles in its path. See [link](#) for details.

Education

University of Michigan, Dec. 2011
 Dearborn, MI
Bachelor of Science in Electrical Engineering
 Schoolcraft College, May 2008
 Livonia, MI
Associates In Engineering

Certificates / Training

ASPICE Fundamentals
 Scrum Master (CSM)
Vector
 Microsar – AUTOSAR solution
 Microsar – Global B
 CANoe / CANalyzer / CAPL
 CANdela Studio
 Diagnostics UDS
Python
 Programming for Everybody
 Python Data Structures
 Harvard - TinyML Fundamental

Software Engineer II	BorgWarner, Inc., Auburn Hills, MI	November 2015 – April 2017
<ul style="list-style-type: none"> Determined customer requirements for embedded software development Integrated software using AUTOSAR Basic Software with GM SUM for All Wheel Drive electronic control module Focused on CAN networks, UDS diagnostics, cyber-security, ECU power moding, and fault management Involved in ECU requirements engineering, software design, software testing, and software release Verified hardware design and schematics 		
Project Engineer	Vector, Inc., Novi, MI	June 2012 – November 2015
<ul style="list-style-type: none"> Determined customer requirements and performed embedded software CAN stack integration Managed overall project Troubleshooted software and other issues with customer's implementation and provided technical support for embedded software Met with customers regularly to establish positive, long-term relationships Worked with product developers and test engineers at OEMs and suppliers 		
Electronics Engineer	Denso Int'l Am., Inc., Southfield, MI	September 2011 – June 2012
<ul style="list-style-type: none"> Reviewed and understood customer requirements, specifications, drawings, and engineering changes for Memory Seat Module Completed test requests and analyzed data to perform product testing from vehicle checks to design validation to product validation testing Participated in benchmarking activities Assisted in the creation of technical reports and presentations 		
EMC Test Engineer	Yazaki N.A., Canton, MI	May 2010 – August 2011
<ul style="list-style-type: none"> Tested various automotive products for electronic interference across a range of frequencies, including the AM band and GPS bands Reviewed customer specifications and standards with supervisor and/or customers to ensure correct test implementation for engineering development, design verification, product verification, and annual verification Internship 		
Infantryman	U.S. Army, Fort Benning, GA	DD-214 available upon request
Performed as a member of a fire team during drills and live combat, learned and used different combat systems.		