

Marin Assaliyski MS, BS

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Objective	<p>Mechatronics Engineer – Mechanical, electronic, and software design, build, and testing.</p> <p>I am a dedicated, self-driven, and dependable early career professional interested in further establishing my career. My experience ranges from automation & control to unsupervised autonomy implementation, including mechanical design and failure analysis. My adaptability and creative response to challenges makes me an excellent candidate for fast passed and highly complex projects. I am highly motivated to grow as an individual and as an engineer, as well as to contribute to the growth and success of my organization. My social personality allows for exceptional group and inter-personal effectiveness, further providing me the ability to motivate those around me to work toward established goals and our mutual development.</p>
Professional Employment	<p>Research and Development Engineer <u>Robert Bosch Tool Corp. - Mount Prospect, IL</u> <u>Jan. 2012 – May 2014</u></p> <ul style="list-style-type: none">• Lead a project to develop a hardware/software system for detection and mitigation of potentially hazardous conditions• Extensive use of methods in sensing, digital signal processing, statistical pattern recognition, and controls on high-bandwidth, multi-core, real-time embedded ARM hardware• Developed custom sensing solutions and methods of actuation by use of pneumatics, electro-mechanical, and electric drive components• Recognized with Inventor Award in 2012 for innovative designs and methods; multiple innovations chosen for patent submission including a novel method for early sensing of hazards
Academic Research	<p>IIT Robotics Laboratory Research Assistant <u>Illinois Institute of Technology - Chicago, IL</u> <u>Sep. 2010 - May 2013</u></p> <ul style="list-style-type: none">• Control system development (software & hardware) for multiple degree of freedom autonomous vehicle• Developed multi-body dynamics simulation in Adams MBD for design verification and optimization; co-simulation between Adams and MATLAB for simulated hardware in the loop testing of control software• Developed and applied a spline based heuristic path-planning algorithm utilizing C++ and the Robot Operating System (ROS) framework
Education	<p>Masters of Science in Mechanical and Aerospace Engineering <u>Illinois Institute of Technology - Chicago, IL</u> <u>Jan. 2011 - May 2014</u></p> <ul style="list-style-type: none">• Thesis: Development of Active Response Technology for Safety Applications in Power Saws• Journal Publication: Design and Experimental Characterization of an Omnidirectional Unmanned Ground Vehicle for Unstructured Terrain (Robotica – Cambridge Journals) <p>Bachelor of Science in Mechanical and Aerospace Engineering <u>Illinois Institute of Technology - Chicago, IL</u> <u>Aug. 2006 - Dec. 2010</u></p> <ul style="list-style-type: none">• Aerospace Engineering (May 2010, Honors)• Mechanical Engineering (December 2010, Honors)• 1st Place Inter-Professional Projects Program (IPRO)• Dean's List of Academic Excellence (2010)
Technical Skillset	<ul style="list-style-type: none">• Finite Element Analysis• Materials Testing and Failure Analysis• Analog and Digital Circuits• Software Development (Embedded, Linux, Windows, and Android)• Modern Control Systems• Advanced Dynamics• Navigation (GNSS) & Guidance• Statistical Pattern Recognition