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| Sattanaathan Thayumanan   |  |  |  | | --- | --- | --- | | Systems Engineer | 23511 Aliso Creek Rd., Aliso Viejo, 92656, United States | 352-284-9712 | | |
| Details 23511 Aliso Creek Rd., Aliso Viejo, 92656, United States  352-284-9712  [vtsnaathan@gmail.com](mailto:vtsnaathan@gmail.com) Links [LinkedIn](https://www.linkedin.com/in/sattanaathan-thayumanan/)  <https://sattanaathan.github.io/> Software Packages Microsoft Visio  Microsoft Office  Synopsys VCFSM  JAMA  Vivado Languages Java  Python  C/C++  Tcl  Embedded C  VHDL  Lua  MATLAB  MS Excel Macros & VBA  Elixir | |  |  |  |  | | --- | --- | --- | --- | |  | | Profile | | |  | I am a computer engineer grad with 4+ years of experience split between designing and architecting software systems and automotive safety systems. I am very passionate about cars and IoT. My ideal new role would allow me to work closely with next-gen automotive systems and/or connected smart devices. | |  |  |  |  |  | | --- | --- | --- | --- | |  | | Employment History | | |  | Systems Engineer at Qualcomm, San Diego January 2020 — Present   * Developed a visual representation of SoC and IP level safety systems design and architecture for effective customer engagement.   + Designed system architecture diagrams highlighting the safety mechanisms, requirements and Assumption of Use (AoU) at the IP and SoC levels.   + Analyzed IP level design details to incorporate IP interfaces at the SoC level. * Achieved the diagnostic coverage required by ISO26262 standard by performing safety analyses such as FMEDA, DFEMA, and DFA for various SoCs.   + Coordinated with IP teams to understand the IP-level safety analyses and incorporated the same on SoC level safety analyses.   + Identified IP/SoC design vulnerabilities and worked with respective teams to improve the design.   + Automated a what-if analysis on FMEDA using MS Excel macros. * Authored and reviewed internal and customer-facing functional safety architecture documents and requirements.  Systems Engineering Intern at Qualcomm, San Diego May 2019 — August 2019   * Played a crucial role in implementing the tool qualification process for tools and products per ISO26262 - the international standard for functional safety of electrical/electronic systems. * Performed gap analysis between the international standard and existing functional safety compliance in Qualcomm tools and provided a methodology to bridge it.  Graduate Research Assistant at University of Florida, Gainesville October 2018 — May 2019   * Designed and implemented an ML-based detection and mitigation system to introduce robustness in the Co-operative Adaptive Cruise Control system.   + Developed a PoC by simulating the CACC system and hacking scenarios.  Software Designer at Alstom, Bangalore, India July 2016 — July 2018   * Collaborated with designers to develop an embedded systems software to perform periodic maintenance of on-board computer systems in ERTMS (European Rail Traffic Management System) trains, at Alstom Belgium. * Enabled the customer engineering team to install, initiate and maintain the Maintenance Support System for metro and main-line rail transportation. * Designed and developed a Low Voltage Control Logic simulation, implementing the train control system design for metro rail transport. | |  |  |  |  |  | | --- | --- | --- | --- | |  | | Education | | |  | MS in Computer Engineering, University of Florida, Gainesville GPA: 3.7/4 August 2018 — December 2019 B. Tech in Electrical and Electronics Engineering, National Institute of Technology Trichy August 2012 — May 2016 | |  |  |  |  |  | | --- | --- | --- | --- | |  | | Leadership & Responsibilities | | |  | Co-founder and lead volunteer - HumaNITTy, Trichy, India July 2013 — Present  National-award-winning philanthropy movement. | | |