

# Jason Wong

{ FPGA/Hardware/Software Developer }

Curious hardware and software developer- loves to explore and understand the latest technology stack. Likes to interact with hardware

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## [Skills]

> **Software**: Linux, Bash, VHDL, TCL, Python, C/C++, Swift, Javascript, MongoDB  
> **Hardware**: PADS Logic/Layout, Vivado  
> **Design**: Adobe XD

## [Education]

> **University of Toronto, Toronto** | Sep. 2012 - May 2017

Electrical And Computer Engineering

## [Experience]

> **ASMPT SEMI, Hong Kong** | Aug. 2017 - Present

Electronic Engineer (Aug. 2017) → Senior Electronic Engineer (Aug. 2022)

- **Real-Time Motion Drivers Development**: Designed and maintained FPGA board firmware and hardware for in-house real-time motion system, enhancing product reliability and performance. Proactively addressed issues reported by product development teams and external customers, resulting in improved customer satisfaction.
- **Circuit Design and Verification**: Successfully designed and verified firmware and circuit functionality for high-speed communication (LVDS, DDR3, 2.5Gbps fiber, USB) and high-power inverter modules (380V, 80A peak), ensuring robust and safe performance in critical applications.
- **FPGA Development Proficiency**: Familiarity with AMD (Xilinx) FPGAs and their development tools for effective simulation, timing closure analysis and hardware integration
- **Feature Development and System Architecture**: Collaborated with cross-functional teams to understand system requirements and architecture, such as data exchange synchronization and register behaviour. Applied techniques such as FPGA primitives, (BRAM, FIFO) and multi-clock design to fulfill design requirements and familiarized with standard protocols such as AXI, QSPI, 8B/10B encoding.
- **Internal Tool Development**: Developed test and production tools in TCL, C, C++, and Python, which increased test consistency and coverage by 50% which, simplified development overhead setup and minimized project delays.
- **Innovative Methodologies**: Continuously explore ways to improve teamwork collaboration such as establishing :
  - Source Control Management: Achieved a 70% reduction in storage size with a 90% improvement in build rates, streamlining development processes.
  - Wiki Page: Established wiki for centralizing onboarding key design information and promoting information sharing among designers to reduce information misplacement and ambiguity affecting development time.

> **University of Toronto, Toronto (Professor W.T. Ng)** | May - Aug. 2016

Summer Volunteer

- **Si vs. GaN Power Efficiency**: Assisted in highly efficient research for Class D Audio Power Amplifiers
- **Lab Equipment Familiarization**: Familiarized with lab equipment (power supply, mixed-signal oscilloscope, signal generator and Audio Precision interface) to verify, debug and analyze circuit design

> **Adparlor, Toronto** | Nov. 2015 - Apr. 2016

Front End Intern

- **Framework enhance**: enhanced and modified the frontend AdParlor platform using Backbone, MarionetteJS and StickIt. Collaborated with backend developers to maintain Twitter and Facebook advertising APIs and minimize downtime. Added new features and assisted with testing during beta and public launch phases for [admocks.adparlor.com](http://admocks.adparlor.com)
- **Proactively investigated bug requests**: reduced existing bug queue by 40%