George Hilliard

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EDUCATION

- **Mississippi State University** **Starkville, MS**
  Bachelor of Science, Computer Engineering *Expected graduation Spring 2016*
  - Current cumulative GPA: 3.79/4.0
  - Completing a minor in Business Administration
  - MSU Presidential Scholar, Joseph Barrier Engineering Scholarship recipient, Tau Beta Pi member, IEEE Eta Kappa Nu member, Phi Kappa Phi Honor Society member, and National Merit Scholar

TECHNICAL SKILLS

Languages: Fluent in C, C++, Java, LaTeX, Python, z80 assembly, and PIC24 assembly; competent in Bourne shell script, Rust, Verilog, and Vimscript; some experience with Wolfram Language
Version control: Extensive experience with Git, some experience with Subversion and Mercurial
Technologies: Extensive development experience with Linux, Qt, and embedded systems; competent with Android, client/server design, and Mac OS X and Windows development

EXPERIENCE

- **Embedded Development Intern, Hypertech Inc., Bartlett, TN** *Summer 2015*
  - Implemented new user interface and business logic functionality in the MaxEnergy 2.0 vehicle tuner.
  - Designed and wrote PC software to parse and annotate CAN bus traffic captured from a vehicle.
  - Streamlined routine vehicle database maintenance tasks for existing product lines.
- **Software Development Intern, Bomgar Corporation, Ridgeland, MS** *Summer 2014*
  - Researched, designed, and implemented a reliable, peer-to-peer, firewall-traversing transport layer in C++. Implemented new functionality in the Bomgar product's user interface.
  - Completed assignments ahead of schedule and gave presentation of work at the end of the summer.
- **Member, MSU EcoCAR2 Team, Mississippi State University** *Fall 2013 – Spring 2014*
  - Won 1st place, Freescale Innovation Award, for infotainment system design.
  - Designed and built a custom 13.3" touchscreen-driven infotainment system in the car. Maintained the Yocto Linux build process for the ARM-based system and co-authored a CAN backend server.
  - Presented Year 2 Winter Workship HIL Presentation/Demonstration of progress toward creating a vehicle control strategy. Demonstrated a functional prototype of our Simulink model.
- **Personal projects and open-source contributions**
  - **Typhoon** — A computer algebra system for the TI-83 Plus
    Wrote Typhoon, an add-on program for Texas Instruments graphing calculators that provides symbolic algebra, arbitrary precision arithmetic, and basic calculus. It is written in C and z80 assembly.
  - **KnightOS** — A third-party operating system for TI graphing calculators
    Contributed to KnightOS, a third-party operating system which implements multithreading, tree filesystems, and more, entirely in z80 assembly. Contributions include a SHA1 hash algorithm, concurrency primitives, and various compression and sorting libraries.
  - **BullyCPP** — A PIC24 bootloader driver
    Wrote a cross-platform PC-side driver program for the Bully Bootloader, an open source bootloader for dsPIC and PIC24 devices. It is reimplemented in C++ and Qt from a reference implementation for Windows in C++/CLI.

See GitHub profile (above) for a complete list of projects.