alexphillips.xyz
San Jose, CA

Alexander Y. Phillips

alexander@keemail.me
github.com/tatsuonline

Education

Bachelor of Science in **Electrical and Computer Engineering** (Purdue University, West Lafayette, IN)
Minor in **Physics**

Skills and Certifications

- **Programming Languages:** C, Python, Go, Bash, Matlab, Assembly (Motorola HCS12), Java.
- **Hardware Description Languages**: System Verilog, ABEL **Other**: HTML, CSS.
- **Software:** Catia, AutoCAD, ModelSim, QuestaSim, Eagle, GNU+Linux Operating System.
- **Certifications:** Certified by Purdue University to handle sealed radioactive sources, LEAN Bronze.
- **Languages:** English, French, Hindi, Malayalam.

Notable Projects

- **32-bit MIPS Microprocessor** built in System Verilog and designed as a Single Cycle, Pipeline and eventually multicore structure.
- **Peer-to-Peer USB Data Switch** utilized to transfer data between computers, built in System Verilog.
- **Scintillator-Photomultiplier Output Pulse Discriminator** uses hardware designed in System Verilog to perform pulse shape discrimination on (in particular) neutron and gamma recoils in scintillators.
- **Disaster Victim Search and Locate Quadcopter** is a quadcopter that is deployed in a disaster zone and creates a cost map to traverse the area, while using a thermal sensor to identify human victims, pinpoint their location on a GPS map and then take a picture of the victim.
- **Digital Slot Machine** uses a microcontroller to emulate a slot machine and even includes animation and sounds.
- **Salvation** is a simple text editor that is written in Python.
- **Flow Colors** is a video game written in Python which is designed to be a clone of the official Flow Colors game.
- **Compiler** written in Java for the Micro Programming Language.
- **CourseGuide.org** is a website that operates as a helpful wiki for every course offered at every university in the U.S. and U.K.

Experience

Jabil Circuit Inc. (San Jose, CA) Test Engineer II, April 2016 - Present
- Designed and built the infrastructure for automated testing of the customer's Enterprise Emulation Platform in Python, Bash and C shell on the GNU + Linux command line.
- Wrote tests for the customer's Enterprise Emulation Platform to ensure quality and maintained the tests with updates.
- Developed and launched a data parser in Python for collection and upload of test results into Jabil's MES system.
- Worked with the mechanical engineering team to develop coolant flush station for the customer's Enterprise Emulation Platform.
- Developed a visual test progress monitor in Python which is now on display on the manufacturing floor.
- Determined design flaws and test gaps for individual customer FRUs and worked with the customers to ensure that the gaps are closed.
- Developed scripts to analyze performance and telemetric data of customer products.

Purdue University Physics Department (West Lafayette, IN) Undergraduate Research Assistant, August 2013 - August 2014
- Developed and implemented methods using data received from XENON100 detector to determine possible Dark Matter interaction. Also set up and created hardware to work with neutron generator.

King Saud University Physics Department (Riyadh, Saudi Arabia) Research Assistant, June 2015 - June 2015
- Designed and created several dye-sensitized solar cells and used university equipment to determine the quantum efficiency of each. Also studied possible alternative materials to reduce the cost of the cells.

Alcatel-Lucent and Emircom (Riyadh, Saudi Arabia) Intern, May 2014 - June 2014
- Studied current optical fiber technology, its implementation and limitations.
- Studied wave demultiplexing and optical fiber splicing.

Activities

CourseGuide.org, *Founder, Administrator*
Free Software Foundation, *Student Member*
Electronic Frontier Foundation, *Student Member*
Purdue Hackers, *Member*

Society of Physics Students, *Member*
Purdue Linux Users Group, *Member*
Purdue Astronomy Club, *Member*