Thomas Dwyer

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Coding Portfolio:https://github.com/tomd1990,
Personal Website http://tomd1990.github.io/app/views/home.html

EDUCATION

PASADENA CITY COLLEGE. Pasadena, California. GPA: 3.75
UNIVERSITY OF CALIFORNIA, LOS ANGELES. Los Angeles, California. GPA: 3.13
Major: EE circuits pathway, with Computer science tech breadth.

COMPLETED COURSEWORK

Analog Circuit Analysis

- Topics covered include the analysis and design of the amplifier building blocks such as the cascode stages, differential amplifiers, and current mirrors. Frequency response, feedback techniques, and stability considerations were also developed. Analysis in both CMOS and bipolar technologies were considered.
- **Class Projects** – Common Emitter Amplifier. A common emitter amplifier was designed to meet the given supply voltage and gain specifications. The simulation was done using PSPICE.
  –Designed and simulated a single stage AB power amplifier using ADS

Digital Circuit Analysis

- Transistor-level digital circuit analysis and design. Modern logic families (static CMOS, pass-transistor, dynamic logic), integrated circuit (IC) layout, digital circuits (logic gates, flip-flops, latches), computer-aided simulation of digital circuits.
- **Class Project** – 1.25 GHz 6-bit absolute value detector. A digital absolute value detector was designed using logic optimization and energy minimization techniques. Cadence was used to simulate layout and signal delay.
  –Designed and implemented a Digital stopwatch using Verilog onto FPGA

Programming Fundamentals using C++/C

- Object Oriented Analysis of various Problems, using different data structures as well as utilizing polymorphism and inheritance. Extending to basic abstractions of computer architecture machine and assembly language MIPS/ x86
- **Class Project**s- Tetris, Spell checker, Custom assembly language, Linux Shell Interpreter clone that offered parallelism in the execution model.

RELATED PROJECTS

- Created a wireless packet sniffer using an Arduino for Household Security Application on Android devices
- Designed a version of Whack-a-mole using verilog

EMPLOYMENT

Independent Contractor/ Production Engineer at Silvus Technologies Dec 2014 - Jun 2015

- Responsible for Testing, scheduling, and coordinating shipment of products.
- Also assisted in the acquisition of Resources for field research.

SKILLS

Software Fluency: MATLAB, Cadence, PSPICE, Visual C++, Microsoft Office Suite, Linux, Xilinx, Git
Programming: C++, C, MATLAB, Microsoft Excel, Verilog, Bash scripting, Python, JS, CSS, HTML, MySQL

ON-GOING PROJECTS

- Contributor to the Open Source project https://github.com/magefree/mage , Magic Game Engine, I've programmed some cards into the project.
- Developing a Magic Draft Simulator.