Hamza Khalid

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U.S Citizen

Objective: To obtain an entry-level telecommunication engineering position in a team-oriented environment, while also gaining innovative skills in the workplace.

Education: George Mason University – Fairfax, Virginia *Graduated May 2019*
Bachelor of Science in Electrical Engineering
GPA: 3.07
Currently studying to take EIT (FE) exam to receive certification

Relevant Courses in Major:

Computer Networking Protocols
Power Systems Analysis
Digital Electronics and Logic Design
Classical System and Control Theory
Information Theory
Electromagnetic Theory
Network Implementation Lab
Signals and Systems
Digital System Design
Computer Organization, Communication and
Linear Electronics
Electric Circuit Analysis: AC & DC

Skills & Qualifications:

- Advanced in Network Distribution via IP routing using GNS3 software as well as TCP/IP networking.
- Proficient in circuit design and utilization using PSPICE software as well as hardware simulations using discrete components (soldering, printed circuit boards, oscilloscopes, DC/AC power supplies etc).
- Firm grasp on utilizing Python, Shell, Perl, CSS, C++ and C programming languages as well as VHSIC Description Language (VHDL), Linux and other command line tools.
- Experience in MATLAB, Simulink, OrCAD, Revit, MS Word and MS Excel.
- Understanding of Digilent Basys 3 Artix-7 FPGA and Basys 2 Spartan-3E FPGA

Projects:

MPLS Layer 3 Virtual Private Network

- Created a private internetwork for two customers across an MPLS provider.
- Networking information shared with providers and customers using eBGP.
- The provider maintains certain routes for customers using VRF instances and distributes information amongst each route using iBGP**.**
- Resulted in a self-healing MPLS provider network that could be easily expanded upon.

Single Cycle 32-bits MIPS Processor using VHDL

- Created a single cycle MIPS RISC processor from scratch whose purpose was to execute any given MIPS assembly language
- Assembled by creating and connecting virtual hardware components for functionality including: Arithmetic Logic Unit, Instruction Memory, Control Unit and etc. all in VHDL.
- Results: Implemented MIPS Processor on Xilinx Basys 2 FPGA board and proved correct functionality, which was used as a foundation for embedded systems such as residential gateways and routers.