

# Pradosh Krishna Kharel

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## Education

- 08/2015 – 10/2016 **M.S, B.S in Computer Engineering**, *Washington University in St. Louis*, St. Louis, MO.  
GPA: 3.79 • Second Major: Electrical Engineering
- 08/2013 – 05/2016 **B.S in Computer Science**, *Washington University in St. Louis*, St. Louis, MO.
- 08/2009 – 05/2013 **B.A in Physics**, *Franklin & Marshall College*, Lancaster, PA.  
Major GPA: 3.54 • Second Major: Mathematics
- Coursework:** Software Engineering, Digital Hardware Development, Embedded Systems, Cloud Applications

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## Work Experience

- 05/2015 – 12/2015 **bioMérieux Inc. – Firmware Verification/Development Co-op**, St. Louis, MO.
- Executed verification protocols to test firmware specifications
  - Wrote scripts to support infrastructure software for repository backups
  - Setup and configured multiple servers, networking equipment, and virtual machines
- 05/2014 – 08/2014 **Google Inc. – Operations Engineering Intern**, Lenoir, NC.
- Involved in troubleshooting, repairing, and upgrading production servers and networking equipment
  - Modified an existing Chrome extension to interface with and control a USB hardware device
  - Integrated XBee radios with an Arduino to remotely control a motor
- 01/2014 – 05/2014 **Washington University in St. Louis – Web Content Assistant**, St. Louis, MO.
- Performed extensive system testing on forms and web pages
  - Updated multiple websites using SharePoint, HTML, and CSS
- 01/2010 – 04/2013 **Franklin & Marshall College – Physics Teaching Assistant and Tutor**, Lancaster, PA.
- Reviewed lab plans to observe, assist, and quiz students during lab
  - Tutored students to improve their understanding and application skills
- 07/2008 – 07/2009 **OLE Nepal – System Administration Intern**, Kathmandu, Nepal.
- Communicated with developer to help port, translate and test application
  - Provided support for software development, networking, and hardware repairs

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## Research Projects

- 01/2016 – 10/2016 **Master's Project**, *Advanced Sensors Research Laboratory, Washington University in St. Louis*.
- Integrated a near infrared based image guided surgery system with mixed reality using Microsoft HoloLens
  - Developed an FPGA design to configure an imaging sensor through SPI and gather data through LVDS
  - Wrote C++ code to process and transfer imaging data from a camera through an FPGA
  - Built a HoloLens app to construct a mixed reality environment using data from an imaging sensor
- 08/2013 – 08/2016 **Class Projects**, *Washington University in St. Louis*.
- Built a DAQ which included developing a PCB layout, an FPGA design, and a multithreaded C++ program
  - Wrote a prototype cloud-based restaurant review iOS app
  - Designed and implemented a digital ten band stereo audio equalizer on hardware
  - Developed and tested a prototype indoor positioning system using TelosB motes and TinyOS
  - Created a simple web app using the MEAN stack and Facebook Graph API
- 09/2013 – 09/2015 **Electronics and Automation Team**, *Lunabotics Club, Washington University in St. Louis*.
- Developed a system to remotely control a robot and interface with hardware
  - Co-authored a paper for the ASCE Earth/Space Conference 2014
- 01/2014 – 04/2014 **Robotic Bin Picking Research**, *Washington University in St. Louis*.
- Researched the integration of a Kinect sensor with a FANUC robotic arm
  - Wrote MATLAB and LabVIEW code for automation, basic image processing, and 3D modelling

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## Skills

**Programming:** C++, C, Python, **HDLs:** Verilog, **Operating Systems:** Linux, Windows  
**VHDL** **Web Development:** LAMP stack