Paul Krogmeier | CV

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Pursuing master's degree in computer engineering from Purdue University. Seeking PhD opportunities in computer science.

Experience

- **Embedded systems programming** — **West Lafayette**
  Purdue OADA undergraduate research team — *May 2014–July 2014*
  Developed software for a wireless, embedded semi-truck weight sensing application. The goal was to provide a way for truck drivers to quickly learn the weight of their load through an app interface that communicated wirelessly with an embedded circuit board.
  - Interfaced Nordic nRF51822 SoC to air pressure sensors over I2C
  - Programmed communication between Andriod application and SoC using Bluetooth Low Energy stack

- **Software for HPC cluster administration** — **Medellin, Colombia**
  APOLO computing group — *May 2016–July 2016*
  Developed software to produce client usage reports for a Linux Rocks cluster administrative team.
  - Wrote python scripts to query cluster load and usage patterns and to present gathered information clearly and succinctly
  - Interfaced with TORQUE and SLURM resource management systems

- **Deep Learning** — **West Lafayette**
  Purdue E-lab — *Sept. 2016–Dec. 2016*
  Experimented with Torch7 deep learning framework to find solutions to reinforcement learning problems.

- **OPLSS 2017** — **Eugene, Oregon**
  Oregon Progamming Languages Summer School — *June 2017*
  Attended research lectures from experts in Programming Languages and Formal Methods. Took part in hands-on sessions for learning about current research software and techniques: Idris, PLT Redex, Concurrent C0

Education

Graduate

- **Purdue University** — **West Lafayette**
  M.S. Computer Engineering, ***GPA: 3.98*** — *2016–present*
  - **Teaching Assistant:**
    · ECE 369 – Discrete Math
  - **Masters Project (Ongoing):** *'Semantically-driven SAT solving'* I am working on finding novel ways to utilize rich, domain-specific semantic information in SAT solving. Specifically, I'm exploring the possibility of using the structure and semantics encoded by program sketches to inform branching heuristics in SAT solvers.

Undergraduate

- **Purdue University** — **West Lafayette**
  B.S. Computer Engineering, ***GPA: 4.0*** — *2012–2016*
- **EAFIT University** — **Medellin, Colombia**
  Study Abroad, Compilers and Operating Systems courses — *Spring 2015*

Coursework

Graduate
CE 608 – Computational Models and Methods
CE 600 – Probabilities and Random Processes
CS 565 – Programming Languages
CS 590 – Artificial Intelligence and Causal Inference
CS 584 – Theory of Computation and Complexity
CS 573 – Data Mining

Undergraduate
CE 368 – Algorithms and Data Structures
CE 369 – Discrete Math
CE 364 – Python and Bash Scripting Lab
CE 337 – ASIC Design Laboratory
CE 437 – Computer Architecture
CE 477 – Digital Systems Senior Design

Technical and Personal skills

- **Programming Languages:**
  Proficient in: C/C++, Python, Matlab, and Verilog
  Basic experience with: SML, Idris, Racket, x86 ISA, MIPS ISA, Java, Lisp, HTML/CSS
- **Research Software:** Coq, Rosette, Sketch, Fiat
- **Languages:** Fluent in Spanish, German, and English (native)
- **Other:** Lead alto saxophone player in Purdue University Jazz Band

Awards

- **Purdue Ross Fellowship:** May 2016
- **100K Strong in the Americas Scholarship:** August 2014