Justin Pearson

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StackExchange: ConvexMartian
GitHub: justinpearson

Industry Experience

- **Controls Engineer, AeroVironment**, 2008 – 2012
  - Worked on the Global Observer: a high-altitude, long-endurance prototype spyplane.
  - Designed and implemented control algorithms in embedded C code to control GO's liquid-hydrogen power plant.
  - Deployed to Edwards Air Force Base for the 15-month flight-test campaign.
  - Debugged complex mechanical, electrical, and networked systems under time pressure.
  - Wrote data analysis tools in Matlab, Python, MySQL, and Bash.
  - Details: http://justinppearson.com/industry.html

  References: Thad Matuszeski, Systems Architect: 805-428-6606, matuszeski@avinc.com

Education

- **PhD in Electrical and Computer Engineering, University of California, Santa Barbara**
  2012 – 2017. Emphasis: Bandwidth- and energy-constrained Control Systems. GPA: 4.0/4.0
  - PhD Advisor: Joao Hespanha (hespanha@ece.ucsb.edu)
  - Details: http://justinppearson.com/research.html
- **MS in Mechanical Engineering, Stanford University**
  Dec 2007, Emphasis: Control Systems. GPA: 3.785/4.0
- **BS in Mechanical Engineering at the University of California, Santa Barbara**
  June 2006, Highest Honors. GPA: 3.91/4.0 cumulative, 3.99/4.0 in major
- **Academic Awards**
  - Towbes Fellowship for academically exceptional first-year graduate student, 2013
  - CCDC Outstanding Scholar Fellowship, 2012

Teaching Experience

- Certificate in College and University Teaching, 2015 (portfolio) (video)
- *Teaching University Discussion Sections* seminar, 2015 – 2017 (video)
- **Instructor of Record**
  - *ENGR 3: Intro to Programming*, UC Santa Barbara, Summer 2015
  - *COMP 150: Object-Oriented Programming*, CSU Channel Islands, Spring 2016
- **Internship Mentor**
  - *School for Scientific Thought*, UC Santa Barbara, 2015
  - *Dos Pueblos High School Summer Robotics Internship*, 2015
- Details: http://justinppearson.com/teaching.html

  References: Lisa Berry, Senior Instructional Consultant: 805-893-8395, lisa.berry@id.ucsb.edu

Fun

- Presentations
  - *An Introduction to Mathematica and the Wolfram Language for Engineers*, 2016 (video)
  - *The Wide World of Control Engineering*, 2015 (video)
  - *Pendulum + Beaglebone + Control Theory = Profit*, 2016 (video)
  - More: http://justinppearson.com/presentations.html
- Projects
  - Load-testing a Rails app on AWS Elastic Beanstalk, 2017 (video) (Heroku app) (code)
  - MapReduce / Paxos class project, 2017 (video) (code)
  - How regenerative braking works, 2017 (video) (code)
  - More: http://justinppearson.com/projects.html