Justin P. Moore

Software Engineer, Data Scientist, Coach
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I am a generalist and a polyglot who loves problem solving: building, breaking, and reverse-engineering. I am deeply fascinated by distributed systems and game theory both in technology (computing, bitcoin) and in nature (fungal networks). I love thinking strategically and I am passionate about clean and efficient code. I have installed autonomous robotic telescopes with private remote access on three different continents. My PhD project blended work in embedded systems, resilient autonomous robotics, automated image reduction and replication with constraints (bandwidth-limited), and data (image) analysis.

My website (moorejust.in) contains additional information about completed projects, both academic and personal.

TECHNICAL SKILLS

Software: (proficient): Python, Java, Git, HTML/CSS, Linux (familiar): SQL, C#, Docker, JavaScript, Jekyll, Mathematica
Hardware: (proficient): Building PCs, networking, soldering, multimeter (familiar): oscilloscope, circuit diagrams

EXPERIENCE

Software Engineer and Business/Technology Advisor, Gokhale Method Enterprise, 2017 - present

- Wrote application using Python to generate relevant localized event content for over 700 global regions
- Led successful Rackspace hosting migration (cloud + metal) to cut hosting costs by 70%
- Led migration to sitewide SSL and meticulously eliminated excess Drupal modules to improve performance
- Provided technical reviews to asses new services and manage transfer (video conferencing, shopping cart)
- Analyzed financial flows and revised protocols in QuickBooks

Astrophysics Ph.D. Candidate and Research Assistant, The University of North Carolina at Chapel Hill, 2011 - 2017

- Built a dual-band, dual-camera polarimeter to observe polarization data of early-time light from Gamma Ray Bursts to help constrain theoretical models with observations.
    - Designed custom firmware and serial protocol over USB via Arduino UNO with motor controller
    - Created custom scaffolding in SolidWorks to attach components (cameras, filter wheels)
    - Developed two C# GUI's to a) use the instrument and b) simultaneously image across the network
    - Incorporated an image analysis library and web interface (Python)
- Maintained and upgraded software and hardware of global robotic telescope network (telescopes, mounts, filter wheels, astronomical cameras, computers, streaming security cameras)

Astronomy Lab Head Teaching Assistant and Observatory Operator, 2011 – 2016

- Developed introductory curriculum and created web app for students to plot lab results
- Operated Morehead Observatory weekly for the general public

EDUCATION

2011 - M.S. Physics (Astrophysics) | The University of North Carolina at Chapel Hill
2008 - B.S. Computer Science, B.S. Physics | Furman University (GPA 3.6)

FUN FACTS

Ultimate Frisbee Coach (Stanford University Men's, University School of Nashville, Carolina Friends School), Ultimate Frisbee Player (ESPN #sctop10 alum, 2015 USA Ultimate College National Champion(captain)), Mycophile (mushroom growing and foraging enthusiast)