Jordan Bartos

4332 Nagle St – Bryan, TX 77801

+1 (713) 412 5491 • jordankbartos@gmail.com • jordanbartos.com

linkedin/in/jordankbartos

University of Michigan
College of LSA
500 S State St. #2005
Ann Arbor, MI 48109

September 7, 2019

To Whom It May Concern,

I'm writing to express my interest in the Research Support Programmer position with the College of LSA at the University of Michigan. My experience with programming, hardware, assisting academic research, and my strong desire to learn new technologies makes me an exceptional candidate for this position.

At the time of my acceptance into the computer science post-baccalaureate program at Oregon State University, I had little programming experience. Despite holding a full-time job throughout this program, I have maintained a high level of performance in my education. I believe the principal reason for this is that I am passionate about learning new technologies. Between terms, I spend much of my free time taking supplementary courses to further my understanding of topics that interest me. One skill-set I taught myself is Arduino, soldering, and working with hardware. I built a simple Data Acquisition System that measures soil moisture readings from four soil moisture sensors, displays the measurements to an LCD screen, logs them to a microSD card, and sends the data over Serial connection to a computer. A link to this project's GitHub repository can be found on my resume.

In addition to this, I have volunteered with the US Army Corps of Engineers, The Nature Conservancy, and the Geography Department at Texas A&M University to assist in experimental setup and data acquisition. With several teams of scientists, I set up experimental equipment, collected samples, and took readings in the field. Additionally, I earned a degree in biology from Texas A&M University during which I took organic chemistry, biochemistry, physics, anatomy and physiology, and animal science labs. I learned about a wide array of experimental equipment and techniques.

A team consisting of two other students and myself competed in the BeaverHacks Winter 2018 Hackathon. In a weekend, we built a C^{++} console-based journaling application for mindfulness. We incorporated user accounts, encryption that makes the log files unreadable to humans, and a feature that displays random happy memories from your user log of entries. A link to the GitHub repository for this project can be found on my resume. When the results were announced, we were astounded to find that we did not just win our category, one created for introductory students, but had won the overall first place prize instead. The experience of working with others to create something good and useful will always stay fresh in my mind. My hope is that this position will offer me more ways to achieve that feeling.

As a teaching assistant for the introduction to computer science course at Oregon State, I spend much of my time reading, debugging, and critiquing code written by my students. This has sharpened my debugging skills over the past year. It has also cemented to me the importance of writing well-documented and well-styled code. Another responsibility I have in this role is showing students

where and why their code did not perform as they expected, though they may not yet understand the technical details at hand. I have helped teach new students the introductory curriculum in C^{++} for 3 terms; however, beginning in Fall 2019, the course I TA will be taught in Python instead. I have assisted in proofing, testing, and debugging the new course materials.

Based upon my experience, my desire to learn, and my attention to detail, I believe I am an ideal candidate for this position. Please contact me for any additional information that you would like. Thank you for your time and consideration.

Sincerely,

Jordan Bartos

Jordan Bartos

Email : jordankbartos@gmail.com
LinkedIn : linkedin.com/in/jordankbartos
GitHub : github.com/jordankbartos
Website : jordanbartos.com
Mobile : 713-412-5491

Education

- **Oregon State University** — Corvallis, OR
  Bachelor of Science in Computer Science in progress; GPA: 4.00 — *January 2018 – Present*
- **Texas A&M University** — College Station, TX
  Bachelor of Science in Biology — *August 2004 – May 2009*

Relevant Experience

- **Oregon State University** — Corvallis, OR
  Teaching Assistant - Intro to Computer Science — *January 2019 - Present*
  - **Instructor**: Assist beginning students in learning the fundamentals of C++ and Python programming.
  - **Grader**: Read and evaluate students' code to provide meaningful feedback.
  - **Course Review**: Assisted in review of course materials for transitioning the course from a C++ to a Python-based curriculum

Additional Skills, Achievements, and Projects

- **Relevant Coursework**: Computer Architecture and Assembly Language, Usability Engineering, Discrete Math, Data Structures, Analysis of Algorithms, Web Development, Software Engineering I
- **Currently Enrolled**: Operating Systems, Software Engineering II
- **Rewind Revitalize - BeaverHacks Winter 2018**: Overall 1st place winner - a C++ console journaling program for mindfulness designed by a team of three intro students at Oregon State University.
- **PokerCalc**: A command line C++ program that determines which payments are Pythonnecessary to settle winnings after a friendly game of poker such that the fewest number of payments necessary are made.
- **Arduino Soil Moisture Sensor**: An arduino-based soil moisture sensor that monitors four capacitive soil moisture sensors and records the values at pre-set time intervals to a file on a micro-SD card
- **Arduino Closet Light Automator**: An arduino-based device that uses an ultrasonic detector to detect a person's presence and automatically turn on the closet light for a pre-determined amount of time.
- **Soldering and Simple Circuit-design and Circuit-building**: Designed, built, and soldered basic circuits and wiring schematics on PCB for my soil moisture sensor and closet light projects

Programming Skills

- **Proficient languages**: C++, C, Python
- **Prior Experience With**: JavaScript, Node.js, Express.js, SQL, Django, HTML, CSS, Bootstrap, MASM
- **Version Control**: Git and GitHub
- **Linux**: GNU Bash

Additional Experience

- **US Army Corps of Engineers** Duck Field Research Facility, NC
  Volunteer *2013*
  - **Sample Collection**: Took vibracore core samples of beach sediments for analysis
  - **Analysis**: Analyzed layers of core samples to determine water content and prepare for long-term storage
- **The Nature Conservancy at Nags Head Woods** Kitty Hawk, NC
  Volunteer *2013*
  - **Data Collection**: Checked water quality meters at Alligator River National Wildlife Refuge for salinity, redox potential, and pH
- **Geography Department, Texas A&M University** College Station, TX
  Volunteer *2012*
  - **Data Collection**: Assisted in data collection using GPS RTK to map sand dune features and blow-outs at Padre Island National Seashore, TX
  - **Equipment Setup**: Assisted setting up imagery equipment for surface layer soil moisture experiments