GURNEY BUCHANAN

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SKILLS

Programming Languages and Frameworks:

- PROFICIENT IN: Python, Java, C++, C, PHP, SQL, JavaScript, TypeScript , NodeJS, Angular, MongoDB, NPM
- EXPERIENCED IN: HTML, CSS, R, OpenCV, D3/C3, PyQt

Software Development:

- PROFICIENT IN: web, server-side, and application development, embedded systems, Linux, Git, MEAN Web Stack
- EXPERIENCED IN: Project Management, Software Design Development, and Team Management
- EXPERIENCED WITH: Agile, Waterfall, SCRUM, Slack, Trello, GitHub Teams, and TravisCI

WORK EXPERIENCE

Appalachian State University Department of Computer Science, Visual and Image Processing Lab January 2016 - May 2017
Intern Software Developer

As an intern at the Visual and Image Processing Lab I developed my skills as a software developer and a team member. I worked on various projects including 3D modeling and printing, embedded software development, image processing, and cross-platform application development.

Appalachian State University Department of Computer Science, Visual and Image Processing Lab May 2017 - August 2018
Project Manager Mentor

Promoted to the project manager of the Beemon project to train, mentor, and oversee the activities of several undergraduate students. As a manager, I maintained my own projects and developed several new ones. Also, I took on a new web-based project and conducted other administrative tasks associated with my leadership role on the team.

Appalachian State University Department of Computer Science, Visual and Image Processing Lab August 2018 - Present
Graduate Research Assistant Lab Manager

My work is focused on software development, leadership, and training. This position involves software upkeep, development on my thesis and the training of a new generation of students to inherit my projects. Ive been given the opportunity to take a leadership role focused on encouraging the professional growth of my team members.

PROJECTS

Blue Ridge Parkway Event Management Website Database Course — Fall 2016

As part of my database course at Appalachian State University, I created an event entry and management website for the Blue Ridge Parkway Foundation using the LAMP web stack.

NWRESA Website Freelance — July 2017

A colleague and I built a website for the Northwest Regional Educational Service Alliance using the LAMP stack. This site allowed for blog posts, event postings, and user registrations for teaching workshops and is still in use.

Beestream Capstone — May 2018

For my capstone project, I created a web application to stream archived and pseudo-live video from honeybee hives monitored by the Beemon project using the MEAN web stack based entirely in JavaScript and TypeScript.

CUDA-Cracker Parallel GPU Programming — Summer 2018

I created a simple brute-force MD5 password cracking utility using CUDA C for my Parallel GPU Programming course.

Comparing GPU Sorting Algorithms Algorithms — Fall 2018

A fellow student and I implemented a Hybrid Bucketsort/Mergesort technique and compared its performance to a Four-Way Radix sort in our final Term Paper for our Algorithms course.

OpenImgur Mobile Device Programming — Fall 2018

As my final project for my Mobile Device Programming course, I developed a simple Imgur application for Android.

EDUCATION

Appalachian State University *Graduated August 2018*
Bachelor of Science in Computer Science
GPA: 4.0
Summa Cum Laude

Appalachian State University *Expected May 2019*
Masters of Science in Computer Science
Expected GPA: 4.0

PROJECTS AND PRESENTATIONS

State of North Carolina Undergraduate Research and Creativity Symposium 2016

North Carolina Central University Determining the Net Traffic at the Entrance of a Honeybee Hive Mentored by Dr. Mitchell Parry and Dr. Rahman Tashakkori

State of North Carolina Undergraduate Research and Creativity Symposium 2017

Campbell University Boundary Configuration's Effect on Measuring the Net Traffic at the Entrance of a Honey Bee Hive Mentored by Dr. Mitchell Parry and Dr. Rahman Tashakkori

National Conference on Undergraduate Research 2017

University of Memphis Determining the Net Traffic at the Entrance of a Honey Bee Hive Mentored by Dr. Mitchell Parry and Dr. Rahman Tashakkori

Appalachian State University Board of Governors Presentation 2017

Appalachian State University Beemon: An Intelligent Honey Bee Monitoring System Presented By: Gurney Buchanan , Jonathan Brotherton, and Luke Craig Mentored by Dr. Mitchell Parry and Dr. Rahman Tashakkori

NC State University Honey Bee Hive Health Analysis Using Drone Population Presented By: Joshua Jackson, Diana Martinez, and Gurney Buchanan Mentored by Dr. Rahman Tashakkori