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, Agile, Waterfall, SCRUM, Slack, Trello, GitHub Teams, and TravisCI

EDUCATION

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

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

WORK EXPERIENCE

Appalachian State University Department of Computer Science, Visual and Image Processing Lab, North Carolina 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, North Carolina 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, North Carolina 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

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.

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.

LEADERSHIP

Visual and Image Processing Lab 2016 - 2019

As a manager of the Visual and Image Processing Lab, I am tasked with leading lab activities such as coordinating meetings, ensuring projects are completed on time, and training new employees in best development practices.

S-STEM Leadership 2015 - 2019

As a McKinney and S-STEM Scholar, I have participated in weekly S-STEM activities which included leadership seminars, training, and two years as the leader of an undergraduate project team.

PRESENTATIONS

State of North Carolina Undergraduate Research and Creativity Symposium 2016
Determining the Net Traffic at the Entrance of a Honeybee Hive *North Carolina State University*

Mentored by Dr. Mitchell Parry and Dr. Rahman Tashakkori

State of North Carolina Undergraduate Research and Creativity Symposium 2017
Boundary Configuration's Effect on Measuring the Net Traffic at the Entrance of a Honey Bee Hive Campbell University

Mentored by Dr. Mitchell Parry and Dr. Rahman Tashakkori

National Conference on Undergraduate Research 2017
Determining the Net Traffic at the Entrance of a Honey Bee Hive *University of Memphis*

Mentored by Dr. Mitchell Parry and Dr. Rahman Tashakkori

Appalachian State University Board of Governors Presentation 2017
Beemon: An Intelligent Honey Bee Monitoring System *Appalachian State University*

Presented By: Gurney Buchanan , Jonathan Brotherton, and Luke Craig
Mentored by Dr. Mitchell Parry and Dr. Rahman Tashakkori

State of North Carolina Undergraduate Research and Creativity Symposium 2018
Honey Bee Hive Health Analysis Using Drone Population *NC State University*

Presented By: Joshua Jackson, Diana Martinez, and Gurney Buchanan
Mentored by Dr. Rahman Tashakkori