NATHAN BAKER

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EDUCATION

Bachelor of Science in Computer Science with Mathematics Minor   Expected Graduation: December 2021
>> Oklahoma State University, Stillwater, Oklahoma   GPA: 4.00

RELEVANT EXPERIENCE

Undergraduate Research Assistant, OSU School of Mechanical and Aerospace Engineering   [October 2019 - Present]
>> Designed a lightweight autopilot framework in both Python and C++ for graduate students to practice implementing estimation and control algorithms in physical airframes.
>> Implemented and tested multiple parallel processing configurations to record and organize sensor data, while optimizing overall performance on a RaspberryPi.
>> Presented several iterations of source code and documentation at weekly lab meetings.
>> Assisting graduate students in the Autonomous Physics Group with experimental setup for analyzing honeybee responses to visual stimuli.

Undergraduate Research Assistant, OSU Department of Computer Science   [June - July 2019]
>> Participated in an undergraduate research program in Data Analytics, funded by the National Science Foundation.
>> Assembled and programmed a heterogeneous team of autonomous drones to efficiently survey atmospheric conditions over a vast space. Demonstrated proficiencies in Python and Robot Operating System.

Artificial Intelligence Bot in Rocket League   [July 2020 - Present]
>> Created a bot that can play a physics-based car soccer video game, based entirely on human gameplay.
>> Developed Bash and Python scripts to automate the collection and processing of thousands of saved game replays.
>> Experimenting with various neural network structures and hyperparameters to refine model performance.

PROGRAMMING / SOFTWARE SKILLS

>> **Languages:** Python, C/C++, Java, HTML, CSS, MATLAB.
>> **Operating Systems:** Windows 10, Ubuntu, ROS, RaspberryPi OS
>> **Software:** Adobe Lightroom Classic, Premiere Pro, Photoshop, Microsoft Office, Affinity Designer.

CAMPUS ACTIVITIES

Association of Computing Machinery   [August 2018 - Present]
>> Participate in events such as programming workshops and meetings that explore new topics in computer science.

Gamers of Oklahoma State University   [August 2018 - Present]
>> Compete in intercollegiate video game tournaments [Rocket League].

COMMUNITY INVOLVEMENT

Bishop McGuinness High School Basketball Promotion Video   [November 2019, 2020]
>> Directed and produced short promotional films to be displayed before varsity basketball games during the season.
>> Collaborated with coaches, players, and parents to create a high-quality product within a 72-hour period.

Christ the King Catholic Church, Oklahoma City, Oklahoma   [May 2016 - June 2019]
>> Operated cameras for live-streamed services on the parish website for those who could not regularly attend.
>> Instructed peers how to utilize audio/video equipment and monitor the output stream.

AWARDS / HONORS

>> Honors College, President's Honor Roll [2018 - Present]   >> Oklahoma State Regents Academic Scholar [2018]