Jackson Bullard

jacksonbullard@gmail.com
(870) 706-4139
github.com/jacksonb-cs
linkedin.com/in/jackson-bullard

EDUCATION

Bachelor of Science in Computer Science (Honors) Expected: May 2023
Minor: Mathematics
University of Arkansas, Fayetteville, AR | **GPA: 4.0**

SKILLS SUMMARY

- Technologies: Git [4.5/5], Flutter [4/5], Dart [4/5], Python [4/5], Kotlin [3/5], Android Studio [3/5], PyTorch [2.5/5], PySpark [2.5/5], Java [2.5/5], CUDA [2/5], C++ [2/5], JavaScript [2/5]
- Development experience using multitier architectures in large, multicomponent projects spanning software and hardware (MVVM and MVP)

SOFTWARE PROJECTS

- *GateMate* Mobile Application (Flutter, GetIt) Present
  - Team project: Personal responsibilities include designing overall project architecture, mobile application design and development, code review for mobile application
  - Multiplatform application allowing farmers to remotely control levee gates in rice fields
  - Weekly updates with project sponsors for feature review and additional feature requests
  - One component of a multidisciplinary project including mechanical and electrical engineering teams
  - https://github.com/GateMate/gatemate-mobile-application
- *Bloodweb* Pathfinder (Android, Kotlin, MVVM, LiveData + DataBinding, Firestore) Fall 2022
  - Generates complex web configurations by sending local data to Firestore database
  - Displays optimal player path in the presence of an adversary
  - https://github.com/jacksonb-cs/Bloodweb-Pathfinder
- Software workflow for Turing machine simulation using DNA (Python) Summer, Fall 2022
  - Generate a set of "polyominoes" to simulate DNA computations
  - Convert assembly of polyominoes to strand-level descriptions for physical simulation
- Machine learning for classifying ground vehicles from arial images (PyTorch) Fall 2021
  - Trained on a mixture of real and synthetic data
- Privacy-Preserving Machine Learning based on Blockchain Summer 2021
  - Developed smart contracts (Solidity) utilized by PyTorch machine learning models, which took advantage of a variety of privacy-preserving techniques

WORK/RESEARCH EXPERIENCE

NSF-Funded Research (REU), University of Arkansas May 2022 – Aug 2022
Contributed to a rapidly growing software ecosystem for designing, simulating, and analyzing the physical characteristics and complexity of algorithmically self-assembling systems (see software projects, self-assembly.net).
(10 hours/week)

Research Assistant, University of Arkansas Jun 2021 – May 2022
Worked on teams researching various data and privacy driven topics including reinforcement learning, machine learning on homomorphically encrypted data, machine learning using blockchain, and more.
(10 hours/week)

Tutor, Computer Organization & Design, OSAS, University of Arkansas Feb 2021 – May 2021
Tailored weekly tutor experience for athletes studying computer science.
(5 hours/week)

Clerk, Porter's Pawn & Bargain Center, Mountain Home, AR Jun 2016 – Aug 2020
Provided customer service regarding secured loans and merchandise.
(School in session: 20 hours/week | School out of session: 40 hours/week)

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HONORS / AWARDS

College of Engineering First-Ranked Senior Fall 2022 – Spring 2023

Outstanding Senior in Computer Science Fall 2022 – Spring 2023

University Academic Scholarship Fall 2022 – Spring 2023

Charles D. Brock Endowed Scholarship in Engineering Fall 2021 – Spring 2023

University of Arkansas Chancellor's & Dean's List Fall 2019 – Spring 2023

Arkansas Governor's Scholarship Fall 2019 – Spring 2023

John Gus Lewis Chancellor's Scholarship Fall 2019 – Spring 2023

LEADERSHIP EXPERIENCE / EXTRACIRRICULAR ORGANIZATIONS

American Indian Science and Engineering Society (AISES)

- Secretary Fall 2022 – Spring 2023
  - Serve as a liaison between members and officers.
- Co-President Spring 2021 – Spring 2022
  - Organized events and met with members about AISES opportunities.
  - Led trip to AISES national conference.

Engineering Career Awareness Program (ECAP) Fall 2019 – Spring 2023
A nationally recognized competitive program designed to promote the success of underrepresented engineering students.