Caleb Xavier Berger

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1301 3rd Street
West Lafayette, IN 47906

Skills Python, Java, Rust, Linux

Education Computer Science student at Purdue University West Lafayette (May 2023)

Professional Experience

Ford/Purdue Partnership — *Test Engineer* — *Aug. 2019 – Current*
Helped create new product utilizing natural language processing to help consumers use and understand thier car's owner's manual.
Technologies: *Python, BERT, TensorFlow*

Indiana University — *Research Intern* — *Feb. – Aug. 2019*
Led redesign of large Python script into maintainable, extensible program.
Designed and built graphical front-end for electrocardiogram study and assisted with data processing and acquisition for research projects.
Instructed non-technical lab team in use of widespread source-control system `git`.
Technologies: *Python, Open CV, Qt 5*

The Quadrangles FRC Team 3494 — *Lead Programmer* — *Jan. 2016 – May 2019*
Created custom video streaming program (`potential-engine`) in 2019 to reduce bandwidth use. Led all robot programming from 2017 to 2019, including training new programmers.
Technologies: *Java, C++, Gradle, Linux*

Bloomington Bicycle Club — *Jr. Web Developer* — *Jan. 2016 – Dec. 2018*
Helped maintain Wordpress site for large annual event (Ride Across Indiana, or RAIN), including adding new elements not found in "stock" Wordpress.
Technologies: *HTML, CSS, Javascript*

Kroger — *Courtesy Clerk* — *June 2017 – Dec. 2018*
Greeted customers and bagged groceries.

Projects Led

Spencer Clinic Subject Interface — *July 2019*
A graphical user interface for collecting subject ECG data, while keeping personal information protected with proven cryptosystems.
Technologies: *Python, Qt 5*

`potential-engine` — *Jan. – June 2019*
A C++ program to stream video from a robot to its operator in real-time using inexpensive hardware. In some cases, `potential-engine` reduced bandwidth consumed by stream to a third of amount used by de facto solution in the *FIRST* Robotics Competition ecosystem.
Technologies: *Raspberry Pi, C++, GStreamer, OpenMAX*

Personal Work

Lopez — *Apr. 2018 – Apr. 2019*
Discord bot providing services for community administration and entertainment.
Technologies: *Python, PostgreSQL*

Better than Memes *Current*

A reddit-like content platform with “nested” boards and threaded comments. Publicly deployed in 2019.

Technologies: *Flask, Jinja2, PostgreSQL, Linux*

Recognition

Eagle Scout *Mar 2017*

FRC Dean's List Semifinalist *2018*

FRC Innovation in Controls Award - Tippecanoe Event *2019*

FRC Innovation in Controls Award - Center Grove Event *2019*

FRC Excellence in Engineering Award - State Championship *2019*