# Charles Cowan

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Knox County, OH

## Technical Skills:

**Programming:** Python 3, JavaScript ES6+, SQL, HTML5, CSS, Java, C
**System design:** Microservices, Domain-driven-design, Event sourcing, Message passing
**Back-end:** PostgreSQL, Django 4, RabbitMQ, FastAPI, MongoDB
**Front-end:** React, React Hooks, Redux Toolkit, DOM manipulation, WebSockets

## Application Development Experience:

**MatchFynder**                                                                                            2023
An application to assist groups in finding a place to eat. Uses React, FastAPI, and Postgresql Docker containers
- Utilized React and Google API to get results/directions to facilitate restaurant search and arrival.
- Created dynamic PostgreSQL insert/select/update functions, streamlining database interactions.
- Implemented Websockets/Redux to manage data; creating a unique/real-time user experience

**Wheeler Dealer**                                                                                         2023
Django microservices for managing a car dealership. Combines vehicle service dept., sales dept., and inventory.
- Worked cohesively using domain-driven design to deliver a user-friendly interface to employees.
- Integrated multiple Django API containers; presented on a React/JavaScript website for users.

**Conference Convergence**                                                                                 2023
An application to manage conference events. Tracks presentations and attendees for each event.
- Translated a monolithic Django app into microservice Docker containers to facilitate expansion.
- Utilized RabbitMQ and PIKA to implement RPC protocols for communications between APIs.

## Professional Experience:

**International Paper |** Maintenance Technician                                                            2021-2022
- Diagnosed and repaired faults in complex manufacturing systems to reduce production stops.
- Conducted interviews with each machine operator weekly, and designed/constructed modifications to their machines to facilitate productivity and quality of life increases.

**Air Force |** Electrical Systems Craftsman                                                               2012-2022
- Reviewed and designed electrical systems to ensure a balanced and functional electrical grid.
- Assessed and resolved errors in electrical systems to prevent further service interruptions.

## Education:

**Hack Reactor,** *Advanced Software Engineering Certificate*                                              2023
**CCAF,** *64 credit hours in Electrical Engineering Technology/General*                                   2013-2018