

Yuan Chao

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EDUCATION

Purdue University, West Lafayette, IN

Fall 2014 – Spring 2018

B.S. Computer Engineering, Minor in Economics

EXPERIENCE

LHP Data Analytic Solutions | *Data Analytics Developer* | Dearborn, MI

March 2019 – Present

Ford Digital Twin

- Developed a real-time location tracking system for plant assets using MotionWorks API
- Implemented a Leaflet.js widget using Autodesk Vault Layouts to create multi-layered interactive maps
- Integrated four legacy Ford applications into a web application, increasing user efficiency spent on accessing data from an average of 35 minutes to under 2 minutes.
- Improved data availability and integrity by eliminating the usage of unofficial Ford documents.
- Designed and wrote database schemas and SQL queries for Ford's MARS database.
- Worked effectively on SCRUM methodology, identifying various story points and getting across deliverables to the end user on a biweekly basis.

Ford E-FPS (Electronic Ford Production System)

- Digitized current Ford Production System by converting physical process confirmation forms used at Ford Dearborn Truck Plant to a web application.
- Reduced 20% in assembly related defects and quality variability across shifts.
- Eliminated potential discrepancy in the way different plant managers are evaluating the adherence to standard of some operations.

Probari Systems/Care Revolution - <https://app.probarisystems.com/>

- Developed Django application connected to a column level encrypted MSSQL database hosted on Azure.
- Implemented a user-friendly a patient dashboard using jQuery and HTML5/CSS.

PROJECTS

Reddit Tracker | Personal Project

Social listening for Reddit, a live keyword tracker with real time alerts

- Containerized web application using Docker to maintain application dependency parity.
- Improved user experience by implementing Twilio's SMS API and Python's email module to increase variety of alert options.
- Developed Django application with Nginx and hosted on AWS EC2 instance.
- Integrated user customizable tracking options stored in a MySQL database to track user posts or comments.

DANSA | Senior Design Team Project | Software Lead

A drone assisted device used to monitor and map Wi-Fi signal strength in desired locations

- Launched heat map generating Python script that takes Wi-Fi RSSI levels from SD card.
- Programmed LED strip with STM Microcontroller to display colors based on Wi-Fi connectivity strength.
- Designed schematics and board layouts for multi-layer high-speed PCB using Autodesk EAGLE.
- Performed simulations and analysis on initial circuit designs to ensure good placement of components.
- Led team to receive 3rd Honorable Mention award at the Purdue Spark Challenge for outstanding achievement in designing and prototyping a microcontroller based project.

SKILLS

- **Programming:** Python, SQL, JavaScript, C/C++, HTML, CSS, Assembly, MATLAB
- **Tools/Frameworks:** Django, Docker, PTC ThingWorx, AWS (EC2, S3, Route 53), Azure, Nginx, Bash, Git
- **Language:** English, Mandarin Chinese