Phoenix Sheppard

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Education

The University of Michigan — Ann Arbor, MI

B.S.E in Computer Science, Minor in Geospatial Science — GPA: 3.73 — *May 2027 (expected graduation)*

- **Coursework**: Data Structures & Algorithms, Web Systems, Computer Organization, Unix Programming, Linear Algebra, OOP in C++

Experience

Software Engineering Intern — May 2025 - Present

Pursuit Markets — *Ann Arbor, MI*

- Saved **$140,000+** per year in redundant API and compute costs by implementing re-extraction filters in the primary web scraping service
- Spearheaded cleanup of **6,00,000+** duplicate MongoDB documents (15% of collection) through developing a custom deduplication pipeline with regex normalization and matching logic
- Enhanced the accuracy of a key customer-facing intelligence platform by **40%** by architecting a Temporal-based distributed web scraping workflow to ensure all contact data remained current within a 30-day window

House Painter, Invoice Clerk — August 2020 – August 2024

Citywide Painting Corp. — *New York, NY*

- Painted Section-8 housing across all five New York City boroughs; coordinated with building management staff to organize daily agenda
- Invoiced management companies using Intuit QuickBooks and Yardi VendorCafe while logging and filing all business transactions

Projects

QuickSync | *Python, FastAPI, React, MongoDB, Httpx, OAuth 2.0*

- Developed a full-stack B2B web application to consolidate invoice creation in QuickBooks and VendorCafe into one interface, reducing manual data input by more than 50%
- Employed the QuickBooks API and HTTPS requests to sync invoice payment status between QuickBooks and VendorCafe, automating a manual task by 100%
- Implemented JSON Web Tokens (JWT) and OAuth 2.0 to secure API endpoints and integrate QuickBooks user data into the QuickSync platform
- Ensured data security with modern cryptographic techniques: Hashing, Symmetric/Asymmetric Encryption
- Pitched QuickSync to live audience of 100+ at V1 Demo Day, placed 3rd out of 11 startup pitches, won cash prize

Raven | *Python, FastAPI, Celery, Redis, SQLite, Scrapy, Docker*

- Engineered a distributed web scraping framework that analyzes page content and ranks links by keyword relevance
- Implemented asynchronous task processing with Celery and Redis, improving scalability and performance
- Used keyword presence, ChatGPT responses API, and other custom heuristics to determine page rank
- Developed API endpoints using FastAPI to provide access to scraping functionalities and results data

Renewable Suitability Classifer | *Python, Scikit-Learn, Pandas, NumPy*

- Implemented Semi-Supervised Random Forest Classifier to predict site suitability for potential wind and solar energy installations across continental US using resource and technical potential metrics
- Extracted Typical Meteorological Year (TMY) data from the National Renewable Energy Laboratory's (NREL) Physical Solar Model; used Chi-squared statistical analysis for feature selection
- Authored research paper (1st author); accepted to International Journal of High School Science
- Presented work at the Junior Science and Humanities Symposium; placed 2nd in NYC region, 7th in NY state

Skills

Languages: Java, C++, Python, JavaScript/TypeScript, SQL, Dart

Tools: MongoDB, PostgreSQL, SQLite, Docker, Git, Linux/Unix, Redis, AWS, Node.js, OAuth 2.0, Temporal.io

Frameworks/Libraries: FastAPI, Next.js, Nest.js, Jest, React.js, Pandas, NumPy, Scikit-Learn, Playwright, Selenium