Patrick Amerlan

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Graduate from the University of Illinois at Chicago with a B.S. in computer science, specializing in back-end and full-stack development. Committed to continuous improvement and always interested in growing skill set.

Education

University of Illinois at Chicago (May 2024)
Bachelor of Science in Computer Science (GPA: 3.3/4.0)

- **Focus: Data Structures/Advanced Data Structures, Algorithms, Systems Programming, Software Design, Machine Learning, Framework-based Development, Database Systems, Secure Web App Development**

College of DuPage (May 2021)
Associate of Engineering

Technical Skills

Languages & Frameworks: C/C++, Python, Java, SQL, JavaScript, React.js, Node.js, Express.js, HTML/CSS, Dart, Flutter
Tools & Technologies: Git, Linux, Windows, REST APIs, Databases, Command Line, GNU Debugger (GDB), Unit Testing

Work Experience

Data Annotation **Jan. 2024 – Present**
AI Trainer

- Engaged in code-topic conversation with new AI models
- Tested, debugged, and corrected AI generated code
- Evaluated multiple AI models to ensure adherence to best coding practices

PD1 Solutions, LLC. **Jul. 2020 – Present**
Installation Engineer

- Conducted on-site installation of machine vision systems
- Assembled vision system controllers
- Installed and configured PC software

Notable Projects

Habere
JavaScript, ReactJS, Google Firebase, Astro

- Habit-tracking web app utilizing Astro and React frameworks for modern, responsive user experience
- Integrated Firebase authentication and Firestore database for secure user data storage and persistence
- Created custom REST API endpoints for data retrieval and storage

Beer Can Collection Mobile App
Dart, Flutter, SQLite

- Built a cross-platform app for antique beer can collections using Flutter
- Imported real data from BCCA into an SQL database, enabling advanced search functionality
- Employed Material Design for a clean and visually pleasing user interface

Morra
Java, Sockets, JavaFX

- Designed a multiplayer game with a GUI, employing multi-threading and networking for a responsive experience
- Used Model-View-Controller architecture for modular development and collaboration
- Implemented server-controlled game logic and data exchange between server and clients

Public Transit Database Tool
Python, SQLite

- Developed a tool to retrieve public transit data using Python's sqlite3 library based on user input
- Implemented various functions to retrieve and organize data, utilizing Matplotlib for graphing
- Applied a tiered architecture to separate code functionalities

Sliding Block Puzzle Solver
C++

- Created a solver for sliding-block puzzles, finding solutions with efficient runtime
- Implemented custom breadth-first search (BFS) algorithm to explore all valid puzzle configurations
- Ensured the shortest solution is found when multiple solutions exist