Cameron Petrie

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Portfolio: https://campetrie.netlify.app/
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EDUCATION

University of Colorado, Boulder, CO, United States   **Aug 2023 - May 2025**
Master of Science in Computer Science (Currently Pursuing)
Cumulative GPA: 3.9/4/.0

Miami University, Oxford, OH, United States
Bachelor of Arts in Economics
Bachelor of Arts in Political Science, Public Administration

TECHNICAL SKILLS

Backend Development: Java, Python, MongoDB, Mongoose, Express.js, Postgres, Kotlin, XML, JSON
Frontend Development: React, Redux, JavaScript/TypeScript, HTML, CSS, jQuery, Angular, Bootstrap, Node.js, NPM, Next.js
Deployment & Version Control: CI/CD practices, GitHub, Git, Docker
Miscellaneous: Machine Learning, GraphQL, UNIX/Linux, Microservices, JIRA, Agile, Confluence, Playwright, Junit, Kotlin testing, OOP, Software Architecture, Distributed Systems, Neo4j, Generative AI

EXPERIENCE

Cognitive Talent Solutions   **Feb 2024 - Current**
ML/AI, Full Stack Engineer
- Led development efforts for LLM interaction module, integrating network visualization to enhance data representation.
- Leveraged AI to automate data cleaning, data analysis, and user interaction experience.
- Refactored codebase substantially improving load times and implemented E2E testing with Playwright.

Takeover Podcasting Network
Full Stack Engineer & UX
- Designed and developed a full stack application with comprehensive CRUD capabilities, emphasizing accessibility and user-centric design.
- Constructed server using Redux, MongoDB, Express.js, and NodeJS, ensuring efficient data management and retrieval.
- Planned extensively with clients and mentors to break down high-level goals into tasks and timelines.
- Implemented custom Material UI components and theming ensuring consistent behavior and appearance of application.

PROJECTS

Project: Publication Source Lineage Provider   **Oct 2023**
- Performed sentiment analysis and topic detection using sophisticated machine learning algorithms.
- Designed and implemented a data storage system using Neo4j, ensuring efficient data management and querying.
- Performed rigorous unit and implementation testing using Python unittest framework

Project: Integration and Migration of Grocery Store Inventory Database   **Sep 2023**
- Implemented indexing techniques and query optimization strategies to enhance database performance
- Demonstrated advanced knowledge of important data structures including linked lists, hash tables, stacks, and queues
- Performed advanced PostgreSQL database migrations with Flyway ensuring proper tracking of database schema changes and versioning over time
- Tested extensively using Junit to reduce database risks, measure performance, and ensure data consistency

Project: Predictive Modeling for Soccer Season Outcomes   **Aug – Sep 2023**
- Evaluated machine learning algorithm and performance ultimately opting for Random Forest and Linear Regression due to versatility and predictive accuracy.
- Utilized Python for scripting, taking advantage of its flexibility and rich ecosystem of data analysis libraries
- Tuned hyperparameters using Bayesian optimization to achieve a 60% accuracy rate for entirety of 2021 Barclay Premiere League season.

Project: Personal Portfolio
- Orchestrated the creation of a captivating ThreeJS web experience integrating Blender 3D models seamlessly into a NextJS SSR framework.
- Engineered custom document layouts using NextJS static HTML features, ensuring a smooth and dynamic user experience.
- Engineered detailed cross-platform functionality functions, catering to iOS devices and WebGL across modern browsers.
- Devised and executed GSAP and ThreeJS conditional functions, considering browser pixel ratios and diverse CPU capabilities.
- Spearheaded the optimization of a 3D model's size, significantly reducing it from over 100 MB to less than 4 MB upon ThreeJS import.
- Demonstrated meticulous attention to detail throughout the optimization process, resulting in a flawless deployment.