

MEGHAN NOVAK

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EDUCATION

University of Notre Dame | Notre Dame, IN

May 2024

B.S. Computer Science, Magna Cum Laude

Cumulative GPA: 3.947

Related Coursework: Data Structures, Algorithms, Operating Systems, Computer Architecture, Linear Algebra, Databases, Distributed Systems, Interactive Dialogue Systems

SKILLS & TECHNOLOGIES

Languages: Python, Java, C#, C++, C, SQL, M (MUMPS), JavaScript, TypeScript, HTML, CSS

Tools & Frameworks: .NET, ReactJS & Native, Flask, Git, MySQL, SQL*Plus, PL/SQL, Figma, Docker, Node.js

Standards: SAML, OAuth2, FHIR, HL7

EXPERIENCE

Epic | Software Developer

Aug. 2024 - Present

- Designed and implemented scalable backend services for Care Everywhere, Epic's global health information exchange platform, enabling secure, standards-compliant interoperability across thousands of healthcare organizations using C#/.NET and M
- Owned the end-to-end software development lifecycle, from writing technical design documents to developing, testing (unit tests, Fiddler, Postman), and maintaining web services post-deployment
- Enhanced authentication and authorization for all core Care Everywhere web services by refining SAML and OAuth2 implementations to accurately identify request initiators, enabling fine-grained access controls and certificate validation
- Improved transparency into the Chart Gateway service by designing and implementing logging enhancements, enabling non-technical staff to independently troubleshoot and accelerate customer installs; recognized as a subject matter expert of the service and key resource for cross-team support
- Led quality assurance efforts as Quality Lead, monitoring metrics, prioritizing fixes, and driving timely resolutions
- Triaged code and design reviews, implementing earlier detection to improve resource alignment through earlier assignment, improving reviewer preparedness and optimizing team cadence and workload
- Facilitated weekly technical design reviews with 30+ cross-functional stakeholders to improve team visibility into ongoing development, align architectural design decisions, and incorporate diverse perspectives to improve solution robustness

Notre Dame HCI Lab | Full Stack Developer & Research Assistant

Feb. 2022 - May 2024

- Led a team of three engineers in developing the UI for a mobile app aimed at increasing access to nutritious and affordable groceries for residents of nearby food deserts, using React Native, Firebase, and Python
- Engineered a RESTful API to suggest grocery items from a dataset of ~100,000 products, integrating external APIs and our lab-developed optimization algorithm

Notre Dame CSE Department | Teaching Assistant - Fundamentals of Computing

Jan. 2023 - May 2024

- Strengthened students' understanding of C and C++ fundamentals and students' ability to apply concepts effectively in assignments through regular office hours
- Led exam review sessions to reinforce core concepts and guide students through problem-solving strategies

Deloitte GPS | Solutions Engineer Intern

June 2023 - Aug. 2023

- Rebuilt the front-end of the Bureau of Engraving and Printing's System Health Monitor application using ReactJS
- Enabled the Bureau of Engraving and Printing's Agile transformation by curating facilitation resources catered to their organizational needs

PROJECTS

AI Travel Assistant

Jan. 2024 - May 2024

- Built and fine-tuned an AI Travel Assistant using a GPT-2 foundation model, improving response accuracy through three phases of iterative training on curated domain-specific data
- Engineered a real-time context integration pipeline using Gensim to dynamically traverse an indexable directory structure populated with content scraped from WikiVoyage, applying principles of retrieval-augmented generation to ground responses in external content and improve factual accuracy of travel advice

SuperAds: Super Bowl Ad Analytics

Jan. 2024 - May 2024

- Built a web application for analyzing Super Bowl advertisements using Python, Flask, HTML, CSS, and an Oracle database
- Containerized the application with Docker to enable seamless deployment across development and production systems
- Integrated a BERT language model to perform sentiment analysis on advertisement comment sections, quantifying audience reactions and surfacing patterns in advertisement perception to draw conclusions on marketing strategies

SpoonNet: A Distributed Spoons Card Game

Jan. 2023 - May 2023

- Developed a custom client-server system in Python using the UDP protocol to support an interactive, multiplayer game
- Engineered a scalable, event-driven, multi-threaded server leveraging asynchronous I/O and thread pooling to process concurrent client RPCs while maintaining consistent state and low latency

ACTIVITIES

Tau Beta Pi Engineering Honors Society | Vice President

May 2023 - May 2024

- Increased member engagement by 20% from the previous year by coordinating group volunteer opportunities