Frederick Hamer

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Senior Software Engineering student at Rose-Hulman Institute of Technology seeking full-time software engineering positions starting in June 2026. Specializing in web development, software architecture, and software quality, with a wide range of project experience, languages, skills, and experiences. Additional backgrounds in mechanical engineering and data annotation demonstrate an ability to onboard quickly and develop proficiency in a multitude of environments and industries. Open to relocation.

Education:

Bachelor of Science, Software Engineering   **May 2026**
Minors in Mechanical Engineering and Mathematics   **GPA: 3.00**
Rose-Hulman Institute of Technology | Terre Haute, IN   **Major GPA: 3.16**

Relevant Courses: Data Structures and Algorithm Analysis, Programming Language Concepts, Software Design, Software Quality Assurance, Software Architecture, Formal Methods, Operating Systems, Databases, Software Project Management, Software Constraints & Evolution, Software Requirements Engineering, Deep Learning

Experience:

Consumer Home Care Referral Portal with Duett   September 2025 – Present
Junior Developer
- Building a consumer-facing B2C SaaS web app to connect individuals with in-home caregivers
- Implement a care request form to allow users to find a care provider that meets their needs
- Complement the current B2B software and use a similar tech stack of ***React*** and ***Django***
- Create a directory of 1,700+ caregivers to organize a wide range of care options and providers
- Adhere to industry standard security and compliance practices for regulated development with HIPPA/GDPR
- Deploy the application with ***AWS*** to impact real users and provide new ways to find in-home care

FGH Software   May 2024 - Present
Freelance Web Development Agency
- Design and develop custom websites for individuals and small business clients' needs
- Maintain developed websites and systems to comply with current standards and technologies
- Integrate 3rd party tools and systems to complement the client's desired needs

DataAnnotationTech, *Remote*   Jan 2024 - Present
Data Annotator and Reviewer
- Write challenging coding, STEM, and generic prompts to challenge LLM's and force errors
- Analyze prompts and responses to discover errors and uncover issues with LLM's and their responses
- Flag ambiguity within prompts or responses to find ways to improve models and their responses
- Rate and review others' work to ensure high quality of work and alignment with task instructions
- Build response rubrics from itemized criterion that models need to have a quality response

Projects:

tornadar.io   Nov 2025 - Present
- Provide a comprehensive tornado analysis web app for hobbyists and enthusiasts with ***Python***
- Probe the NWS API for tornado warning and like updates using ***Celery***
- Retrieve raw level 2 NSR-88D NEXRAD radar data from the AWS S3 bucket
- Translate and merge raw data products to radar map overlays for data consumption
- Use a ***React*** frontend for displaying radar data, warning areas, and weather parameters
- Deployment with ***AWS*** for scalability, performance, and availability

Real vs AI Generated Image Detector   Oct 2025 – Nov 2025
- Trained a deep learning model using ***Python*** to detect if images are real or AI with up to 96% test accuracy

- Explored relevant existing models such as ResNet, AlexNet, and DIRE
- Trained on the CIFAKE dataset based on the CIFAR-10 dataset

Catan Software Maintenance Project   Apr 2025 – May 2025
- Refactored legacy *Java* code of a brownfield Catan Board Game to remove bad code smells and designs
- Implemented new features and test cases to expand functionality and achieve full code coverage
- Wrote system documentation for different stakeholders: product support, devs, and users

Racket Interpreter   Jan 2025 – Feb 2025
- Wrote an interpreter in *Racket* to implement basic functional programming language constructs
- Expanded on basic constructs to implement more complex ones such as the let family of expressions
- Converted to continuation passing style to minimize stack frames and improve performance

Smart Minigolf Game   Oct 2024 – Nov 2024
- Built a putting green surface with a rotating hole platform as a fun putting challenge
- Designed different game levels with different rotating parameters such as speed, direction, and pulsation
- Embedded software onto an Arduino written in *C++* to control the game
- Included sensors such as IR as well as motors to control the hole and detect makes and misses

Catan Board Game   March 2024 – May 2024
- Designed and built a Catan Board Game using *Java* and Swing graphics
- Achieved complete code coverage via *BVA* and mutation testing
- Employed *TDD* to maintain Git workflow, version control, and steady test development
- Implemented i18n to offer locale options for different languages and expandability

Computer Architecture Processor Project   Dec 2023 – Feb 2024
- Designed a general-purpose processor with an accumulator-based architecture
- Created an assembly-type instruction set specific to the processor hardware
- Modeled, tested, and debugged the design with *Verilog* to maximize performance
- Experienced documentation of design choices and compromises on a large-scale project

Robotic Motion Generation Optimizer   April 2022
- Developed an algorithm to determine the path of a robot arm when moving bolts
- Used *MATLAB* to find the optimal path for the robot with 3 different bolt types and holes
- Generalized the algorithm to work with various csv input sizes and data

Skills:

Java, Python, C, C++, SQL, JavaScript, HTML, CSS, Racket, MATLAB, Simulink, Git, React, AWS

Honors & Involvement:

Deans List – Rose-Hulman Institute of Technology	3/14 Quarters
Triangle Fraternity – Member	March 2022 – Present
Men's Soccer Team – Player	August 2021 – May 2023