




TOBY FRICK

 github.com/FrickTob –  fricktob@grinnell.edu –  (816)-665-2534

SKILLS

People:	Excellent Technical Communicator, Dynamic Problem Solver
Programming:	Java, Python, C++, MIPS, R, MATLAB, SQL
Software & Tools:	Git/Github, Linux, Android Studio, Shiny, Arduino, Raspberry Pi
Concepts & Methodologies:	Agile Development and Collaboration, MVC Architecture

WORK EXPERIENCE

Epic Systems <i>Software Developer Intern</i> - Need to complete after internship	<i>June 2023 - August 2023</i>
Grinnell College <i>Computer Science Tutor</i> - Utilized guided questioning strategies to enhance student learning outcomes - Assisted students learning functional, imperative, and object-oriented problem solving strategies - Most positively reviewed tutor at Grinnell College Spring 2022	<i>February 2022 - May 2022</i>

PROJECTS

Chess Board Piece Location and Identification
Machine Learning, Transfer Learning, Image Homography, Correlation Filtering
- Employed computer vision techniques in MATLAB to identify the position of chess board images
- Applied transfer learning to adapt a pretrained CNN for chess piece classification
- Utilized correlation with a handmade filter bank for feature matching
- Implemented image homography for planar transformations

Hue-Doku Colorful Sudoku Android Application
App Development, Software Design, Software Documentation
- Android app available on the Google Play Store designed as a twist on the classic Sudoku experience
- Users solve Sudoku puzzles without numbers and instead use 9 distinct colors to fill the 9x9 sudoku grid
- Leverages view models and local data storage for an effective user experience
- Developed with Java and XML

Virtual Datapath and Custom Instruction Set Architecture
Assembly Programming, Computer Architecture, Computer Organization
- Designed a virtual datapath in Logisim which supports a 16 bit custom instruction set architecture
- Implemented the instruction set architecture with 39 unique instructions

EDUCATION

Grinnell College <i>Bachelor of Arts in Computer Science</i>	<i>August 2020 - May 2024</i> <i>GPA 3.8</i>
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RELEVANT COURSEWORK

Functional Problem Solving (Racket) - Imperative Problem Solving (C) - Object Oriented Programming (Java)
Computer Organization and Architecture (MIPS) - Computer Vision (MATLAB) - Multivariable Calculus
Software Design and Development (R, Shiny) - Linear Algebra - Graph Theory - Applied Statistics