TOBY FRICK

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

EDUCATION

Grinnell College   *August 2020 - May 2024*
Bachelor of Arts in Computer Science   *GPA 3.8*

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

WORK EXPERIENCE

Epic Systems   *June 2023 - August 2023*
Software Developer Intern
- Need to complete after internship

Grinnell College   *February 2022 - May 2022*
Computer Science Tutor
- 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

SKILLS

People:	Demonstrated Technical Communicator, Dynamic Problem Solver
Programming:	Java, Javascript, HTML/CSS, Python, MIPS, R, MATLAB, SQL
Software & Tools:	Git/Github, Unix, Android Studio, React, Microcontrollers, Firebase
Methodologies:	Agile Development and Collaboration, MVC Architecture

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