Ryan Raymond

1731 N Kilburn Rd

Rochester Hills, MI

48306

linkedin.com/in/ryan-raymond-b24b10205

https://sr.ht/~rjraymond/ (Github)

rjraymond@oakland.edu

(248) 212-3710

Skills

3D Printing, Assembly (x86), Bash, Bison, C, CAD, COBOL, CSS, C++, Flex, FORTRAN, GCC, GNU, GTK4, Guile, HTML, Java, LaTeX, Linux, Lisp, Makefile, Metasploit, PHP, Python, Scheme, React, SQL, Vala, Yacc.
Conversant in Japanese.

Education

Highschool   Classical Conversations of Lapeer
August 2016 - May 2020, 3.9 GPA

Undergraduate   B.S., Computer Science from Oakland University (in-progress)
January 2020 - April 2023
Honors College, Dean's List, and Department Honors
Global GPA 3.67, Department GPA: 3.90

Self-Study Projects (demo at http://104.237.150.202)

Multiple software development projects, including:

- Forensic Examiner (GUI Source: https://git.sr.ht/ rjraymond/ForGUI) Graphical front-end for the OU ML and AI lab's SMILE project. See **Employment** – Undergraduate Researcher – Khalid Malik.

- GenBonk (Source: https://git.sr.ht/ rjraymond/CSI4780) Basic bioninformatics database. An incomplete functional clone of NCBI/Pubmed. Pulls data from trusted sources, stores locally, and presents a static web interface for browsing. Created as part of bioinformatics term project.

- Rate Our Professors (https://sr.ht/~rjraymond/RateOurProfessors) SQLite3 database with PHP frontend. Allows for reading, writing, moderating, and compositing reviews for professors and classes. Created as database implementation project, working in pairs.

- RFPS (https://sr.ht/~rjraymond/RFPS/) – As mentioned under **employment**, research project with Andrew Claussen (Oakland University Department of Mathematics and Statistics) to test validity of research hypothesis. Created procedural spanning paths using a scratch-built python script, then feeds an array to a GTK4 graphical window which uses the Cairo library to efficiently draw graphs.

Extra-curricular projects and work including:

- Homemade Electric Motorcycle

  July 2017

Used hub-motor kit and 4, 12-volt AGM lead-acid batteries to turn a manual bicycle into an electric motorcycle. Top speed of 30mph, with a 20 mile range. Removable automotive fuses acted as "keys".

- First Robotics Competition, Adams Highschool

  Adambots – Team 245

  January, 2018 – May, 2018

  Worked on the CAD team designing parts for fabrication using a 3D-printer, metal-break, lathe, or router, as well as assembly using ordered parts. Designed with Autodesk Inventor. Learned to collaborate with other designers.

Employment

Undergraduate Researcher

July 2022 - Present

- Khalid Malik, PhD (Department of Engineering and Computer Science)

  January 2023 - Present

  Developed the graphical front-end for an application designed to detect deepfake audio. Used react to write the GUI, and included environment variables to control state, allowing the app to be run either locally or remotely. Get and Post requests are used to call back-end scripts, allowing the app to access our server's models and resources.

- Andrew Claussen, PhD (Department of Math and Statistics)

  July 2022 – September 2022

  Tasked with verifying a proposal concerning the occurrence of the Catalan numbers in certain kinds of graphs, I created a Python program to verify this hypothesis against the numbers derived from experimental data. When my script returned results contradicting this proposal, I created functionality to graphically represent the graphs of such edge cases, proving the proposal to be incorrect and in need of further development.

Undergraduate Grader

August 2021 - Present
In both cases, used the answer key, online resources, and my own work to judge students' homework submissions. Inferred students' comprehension of material, checked for signs of cheating, and collected and compiled grades.

- Baruch Cahlon – Linear Programming and Elementary Functions

  August 2021 – December 2021

- Peter Shi – Calculus 1

  August 2022 – December 2022