KHURRAM MUSTAFA

US CITIZEN | 105 E 15th St Apt 35, New York, NY 10003 | 347-698-4593

kmust13@wgu.edu | kmustafa.com | linkedin.com/in/khromem | github.com/khromem

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EDUCATION

Western Governors University Millcreek, UT

BS, Computer Science *Graduating: April 2024*

Coursework: Data Structures and Algorithms, Operating Systems, Software Engineering, Databases, Computer Architecture

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EXPERIENCE

WorkOrPay.com by Envariable LLC (Live) New York, NY

Co-Founder *March 2022 – July 2022*

- Developed WorkOrPay, an accountability platform that allows users to make goals and voluntarily stake money that will be donated to a charity if the user does not accomplish their goal.
- Successfully launched WorkOrPay on HackerNews and garnered over 100 paying users in just two months, resulting in more than $17,000 staked.
- Utilized ReactJS and Material UI to design and develop the WorkOrPay website, allowing users to create accounts using either an email or external identity providers such as Google.
- Implemented Stripe for enabling user subscriptions and deposits. Ensured secure transactions by using Vercel cloud functions to update database entries accordingly.
- Utilized a combination of Google Analytics and Mixpanel to track user flow and identify UI issues, which led to a 40% increase in visitor-to-subscriber conversion rate by simplifying parts of the website.
- Developed and implemented new features to enhance the user experience, including personalized dashboards and progress tracking.

Google Mountain View, CA

Student at Google Computer Science Summer Institute (CSSI) *June 2020 – July 2020*

- Participated in a selective computer science program taught by Google software engineers.
- Developed an online multiplayer Pac-Man game that supports 2 to 4 concurrent players for the capstone project.
- Acquired practical knowledge in web development technologies like HTML, CSS, and JavaScript, and gained an understanding of design principles, user experience, and accessibility.
- Attended workshops on collaborative software development and modern web development to gain a comprehensive understanding of the software development process.

PROJECTS

Save YouTube Music | SaveYTM.com | (Live, GitHub)

- Developed a minimalist music player, SaveYTM, for YouTube Music/Playlist users. Enables archiving of music videos and additional player functionality.
- Built frontend with React/React Router/Chakra UI, utilizing YouTube Player API for streaming audio. Implemented Firebase Authentication.
- Leveraged OAuth2 for read-only access to users' YouTube playlists. Authentication handled by Express server on NodeJS, with OAuth credentials stored securely on GCP's NoSQL Filestore.
- Implemented backend Express server to download audio of selected music videos from YouTube and upload to AWS S3 bucket for future access.
- Deployed backend on Google App Engine for automatic scaling, and hosted frontend on Firebase.

PacMan Battle Royale Game (GitHub)

- Collaborated with two teammates at Google CSSI to create a real-time multiplayer PacMan game, allowing up to four players concurrently.
- Employed p5.js to render the browser canvas. Implemented features such as hit detection, power-ups, and ghosts.
- Utilized the A* path-finding algorithm to enable the ghosts to determine the optimal path to the nearest PacMan.
- Enabled multiplayer gameplay by utilizing a Firestore database to manage shared state.
- Recognized for technical excellence and innovation, the game was praised as one of the standout projects in the program.

SKILLS

Languages: JavaScript, Python, Go, Java, C, SQL, HTML, CSS, Scheme

Technologies: React, NodeJS, Express, GCP, Firebase, AWS S3, OAuth2, MongoDB, PostgreSQL, Git