Ridwan Sharif

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Skills

· Experience in Go, C/C++, Python, Scheme/Racket using vim/tmux and Git
· Interested in security/cryptography, backend engineering and systems design

Projects

mqueue *git.io/vMKXe*
· Constructed an in-memory message broker in Go over an HTTP API
· Designed a concurrent, thread-safe publisher/subscriber architecture with multiple topics
· Built an embeddable client library in Go to interface with the API

prsa *git.io/vMKPx*
· Built the RSA public-key cryptosystem in Python with a command line client
· Implemented ciphertext generation and decryption routines using generated public-private keypair
· Used highly performant exponentiation algorithms, 1000+ unique page views

lispy *git.io/vyfVt*
· Built a Scheme/LISP interpreter in Python with interactive command line environment
· Implemented tokeniziation, parsing, abstract syntax trees and evaluating of valid scheme code
· Complete with valid scheme interpretation of data structures, error handling and lambda calculus

fzysearch *git.io/vKyww*
· Published a fuzzy-string matching pip module/library in Python for approximated query matches
· Used Levenshtein's edit distance algorithm and average weighted distance for ordering results

airport *git.io/vMKXJ*
· Published a command utility for fast directory navigation using previously visited locations
· Used fzysearch to prune through search space and identify closest matching result

Education

University of Waterloo 2016 – 2021 *(expected)*
Bachelors of Computer Science, Honours
· Hack the North (Volunteer), UW Robotics Club, President's Scholarship (95th percentile)
· Selected Courses: Algorithm Design, Functional Programming

Activities and Volunteering

Volunteer in UAE *Dubai, UAE*
· Volunteered at the Summit Silence, Pink Walkathon, Pink Book Sale, Nike Run, Operation Ozone, Helping Hands, Blood Drives and Ocean Cleanup

HP Electronics *Dubai, UAE*
· Sold 450+ laptops and 250+ printers at Gitex (Gulf information technology exhibition)

St. Mary's Catholic High School *Dubai, UAE*
· Elected Head-Boy, House-Captain, Senior Prefect and Senior Member of solidarity group
· Designed school yearbook and prom invites, organised charity events