Johan Yim
Software Developer

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Experience

2024-05
Present

Software Developer BG Automotive

- Implemented stateless, secure authentication using JWTs stored in HTTP-only cookies, with access and refresh token rotation for session management.

- Implemented HTTP middleware using `Redis` as an intermediary cache layer, Server-Sent Events, and frontend Virtualization/Windowing to handle payloads 600 times larger, 400 times faster.

- Developed a silent background process that monitors key presses and recognizes barcode syntax, triggering image capture from the warehouse CCTV system.

- Applied systems programming concepts, including mutex-based synchronization, to prevent race conditions and manage concurrent write operations.

- Used `cron`, the GNU coreutils, and `git` to create an automated deployment pipeline for various automated services.

- Deployed 10 containerized cloud applications optimized for resource efficiency, achieving reliable operation on a single low-tier cloud instance.

2024-03
2024-05

Volunteer Data Assistant Bath Royal Literary and Scientific Institution

- Used text-manipulation tools from the GNU coreutils such as `awk` and `sed` to process and clean existing tabular data

- Interfaced with the `xlsxwriter` C library to programmatically generate non-trivial excel spreadsheets, such as spawning charts and extracting/including VBA macros

Projects

Structure Preserving Encryption and Decryption ○ johanyim/spead

- Implements a module for response caching, which can be used in a variety of related projects

- Intermediary between application and data repository such as an SQL Database

- Practiced writing Documentation

- Practiced writing tests

- Implements a module for response caching, which can be used in a variety of related projects

Education

2019-09
2023-05

Computer Science MComp (Hons) Master of Computing, University of Bath

Functional Programing (82%) - Machine Learning (77%) - Statistics for Data Science (73%) - Cryptography (78%) - Data Structures and Algorithms (82%) - Computer Systems Architecture (82%)

2017-09
2019-05

International Baccalaureate (IB) King George V School, Hong Kong

HL Maths (7) - HL Physics (7) - HL Computing (5)