Fu Yingji

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Education

- **City University of Hong Kong** — Kowloon, Hong Kong SAR, China
  Msc in Biomedical Engineering — *Sep 2023 -*
  Perspective: Medical Imaging Analysis, Medical Robotics, Computer-Aided Diagnosis (CAD)
- **Southern Medical University (SMU)** — Guangzhou, Guangdong, China
  Bachelor of Biomedical Engineering; GPA: 3.35/4.0 (Rank 7/35) — *Sep 2018 - July 2022*
  Courses: Programming in C++ (97), Computer Networks Principle and Application (94.3), Digital Image Processing (94.3), Data Structure (94).

Research Experience

- **Intelligent Analysis of Histopathological Images in Inflammatory Bowel Disease**
  Huang Lab, Nanfang Hospital (SMU), Main Researcher — *June 2021 - July 2022*
  - **System Call Trace Record/Replay**: Worked on building a trace replayer at system call level to reproduce system call operations that were captured during a specific workload using C, C++, DataSeries. Developed a wrapper class that makes C++ functions callable by strace C code.
- **Stony Brook University** — Stony Brook, NY
  Research Assistant - Prof. Erez Zadok — *May 2016 - August 2016*
  - **System Call Trace Record/Replay**: Worked on building a trace replayer at system call level to reproduce system call operations that were captured during a specific workload using C, C++, DataSeries. Developed a wrapper class that makes C++ functions callable by strace C code.
- **Samsung Research Institute** — Noida, India
  Software Developer Engineer — *Jun 2012 - July 2015*
  - **Android File System**:
    - Involved in board bring-up activities for Android Smart phones based on Exynos and Broadcom chipsets on Android version 4.3 Jelly Bean to Android 5.0 Lollipop.
    - Experienced in porting of File System (FAT, EXFAT, SDCARDFS, EXT4) on Samsung mobile's proprietary platform.
    - Enhanced performance of smart phones having low RAM by analyzing performance using blktrace and tuning kernel parameters. The code was merged in around 15 smart phones.

Academic Projects

- **Plug board Proxy (Networking)**: Developed a plug board proxy that adds an extra layer of encryption to connections towards TCP services. Clients running on same server connect to pbproxy, which then relays all traffic to actual services. (Mar '16)
- **Asynchronous Work Queue Manager (Kernel Programming)**: Developed a kernel module to serve as an asynchronous work queue manager with configurable worker threads. Implemented netlink sockets to propagate callbacks from kernel to user land and throttling to improve job extraction latency. (Nov '15)
- **Anti-Malware Stackable File System (Kernel Programming)**: Implemented a stackable, anti-malware Linux file system that prevents the existing file system from being corrupted by malware by detecting virus pattern while attempting to open, read and write a file. (Oct '15)
- **File Encryption System Call (Kernel Programming)**: Implemented a system call in Linux kernel, which supports multiple ciphers to encrypt or decrypt an input file.(Sep '15)
- **Peg- Solitaire, Connect Four, Sudoku (Game Development)**: Designed a Peg Solitaire, Connect Four and Sudoku using Iterative Deepening Search, Alpha-beta pruning and Backtracking, MRV and Forward Chaining Artificial Intelligence Algorithms respectively in Python. (Aug '15)

Skills Summary

- **Languages**: Java, C++, Python, C, SQL, Unix scripting
- **Tools**: Kubernetes, Docker, Springboot, GIT, JIRA, Matlab, XCode, Postgres

Honors and Awards

- Selected in top 20 students for the Code House event organized by VMware in August15 - August17, 2016.
- Ranked first among batch of 60 students in my Computer Science Engineering Branch.
- Ranked fifth among batch of 500 students at High School Level A.I.S.S.E 2005