Yitong Tang

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EDUCATION

University of British Columbia Vancouver, BC
Bachelor of Engineering - Computer Engineering;
Minor in Honor Mathematics *Sept 2020 - May 2024*

- **Courses:** Algorithms, Operating Systems, Machine Learning, Deep Learning, Database Design, Big Data Analytics, Computer Networks

SKILLS SUMMARY

Languages: Java (applied in android app development, 2022), Python (applied in machine learning, 2023), SQL (used in delivery database, 2022), C/C++/C#, HTML/CSS, Javascript, PHP, Verilog, Arm/X86

Frameworks: React (applied in chat app, 2022), Nginx (recently used in personal website, 2023), Scikit/Numpy (used in machine learning, 2023)

Tools: Git (daily use), OpenCV (applied in smart scale, 2022), PyTorch (applied in deep learning recently), Linux, Matlab, NodeJS, Android Studio, Regex, Unity

Databases: MySQL (applied in food delivery database, 2022), MongoDB (applied in group chat, 2022), SQLite

Documentation: Latex, Jupyter, Markdown

PROJECTS

Wiki Buffer – **a tool for caching and analyzing Wikipedia pages:** a program that uses buffer, cache, sockets, and BFS for storing recently browsed Wikipedia pages and finding the shortest path between two pages. Implement buffer and cache mechanisms. Implement sockets for getting update from the server. Implement BFS to find the shortest path. Tech: Java, socket, TCP, BFS. (Oct, 2021, 2rd year)

Dancing Robot – **a group project for an entertaining robot:** a robot that can dance and play dual-track music via keyboard and an LCD screen. Implemented high-level motor control and designed the human-computer interface on the LCD screen. Tech: Mu Py, Soldering, Movement Encoding. (Feb. 2022, 2rd year)

Smart Scale - **a physical scale with smart features**: help customers to self-checkout in the supermarket by machine learning and self-recognizing the item types, displaying price with weight and calories. Implemented physical features, web frontend and backend, and machine learning. Tech: raspberry-pi, html/css, javascript, Nginx, tensorflow. (Apr. 2022, 2rd year)

Second-hand trading platform – **a group project, an android app for second-hand trading:** help students to resell unused items. Planned the project by designing a database and sequence diagram. Implemented frontend and bind api and google service. Tech: Java on android, MongoDB, Google Service. (Aug. 2022, 3rd year)

SimpleDB – **a class project for Database Systems Design**: a system to retrieve information on food delivery platforms, including restaurants, users, promotions, etc. Implemented a core SQLite database and a user-friendly frontend for a food delivery app. Tech: PHP, SQLite. (Nov. 2022, 3rd year)

Group Chat - **a webapp for students to chat in their own interested group (like discord)**: a platform for users to join or create interest-based groups and chat. Implemented a web frontend and backend and used sockets for real-time updates. A faster retrieval of data is promised by organizing chat information based on the time the chat occurred. Tech: Javascript, NodeJS, MongoDB, HTML/CSS. (Dec. 2022, 3rd year)

EXPERIENCE & VOLUNTEER

Volunteer at Autistic Family Support Group China
Guide and Guard autistic children with knowledge from AP Psychology. *Dec. 2018 - May. 2020*

Hold a Speech in Ningbo New Library China
Present and explain SEIR virus model to public, helping people know covid. *Feb. 2020*

Orientation Leader Canada
Guide new coming students for lives in UBC *Sept. 2022*

HONORS AND AWARDS

- **Top 5% worldwide in American Mathematics Contest (AMC) 12** – Feb, 2019
- **8 points in American Invitational Mathematics Examination (AIME) 2** – March, 2019
  - avg: 5.48, mean: 5; only candidates with 5% percentile in AMC12 can join AIME Contest
- **Sixth place in Eastern China in American Regional Mathematics Competition as a group leader** – Apr, 2019
- **Outstanding International Student Award** – Sept. 2020