Julia Sangster

BSc (2021), BCS (2025)

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Educational History

Bachelor of Computer Science, Co-op Sept 2022 – Apr 2025
University of British Columbia, Department of Computer Science – Vancouver, BC
Relevant Coursework: Operating Systems, HCI, Advanced DBMS, Advanced Machine Learning, Computer Vision, Advanced DSA

Bachelor of Science, Honours Biochemistry Co-op Sept 2016 - Apr 2021
University of Waterloo, Department of Chemistry and Biology - Waterloo, ON

Professional History - Engineering

Biomedical Algorithms Engineering Co-op
Kardium Inc. – Burnaby, BC Jan 2024 – Aug 2024

- Independently developed 3 desktop applications for post-operative review of 3D cardiac mapping data, enabling system engineers and clinicians to assess performance of computer vision algorithms via real-time cardiac map reconstruction.
- Improved data pipelines for processing Java log files from surgical instrument controllers, into MATLAB/Python compatible data frames (e.g. NumPy, pandas), improving data accessibility and speed of conversion.
- Followed Agile principles with ticketing, code reviews and daily stand-ups, ensuring code quality and consistent velocity.

Professional History – Not Code, Still Cool!

Immunological Assays Research Assistant
University of Waterloo – Department of Biology – Waterloo, ON Sept 2020 – Dec 2021
Took immune proteins from AlphaFold predictions to purified and crystalized recombinant proteins.

Biologics Research Assistant Co-op
AdMare Bioinnovations – Vancouver, BC Jan 2020 – Apr 2020
Compared antibody-based cancer drugs performance with human cell culture and flow cytometry assays.

Genomics Research Assistant Co-op
Hospital for Sick Children (SickKids) – Toronto, ON Sept 2018 – Aug 2019
Validated mutations (SNPs/CNVs) at the bench, for validation of a genomics ML pipeline to find autism-related genes.

Skills

Languages Java · Javascript · Typescript · Python · MATLAB · Bash · R · C · C++ · HTML · CSS
Libraries/Frameworks React · Angular · Next.js · Express · NumPy · SciPy · scikit-learn · TensorFlow · PyTorch · Flask
Tools/Platforms Git · GitHub · BitBucket · Figma · PostgresSQL · Postman · Vite · Cursor · ChatGPT · Claude AI

Projects

Insight UBC Navigator | **React, Typescript, Express, Chai** | Developed a graphical web-application of reactive graphs (via Chart.js) with summary statistics for UBC courses (i.e. highest graded class in a department). Included implementing an SQL-like querying language, a RESTful Express server, and a front-end using React.

Crochet Blanket Designer | **Java, Swing, JUnit** | Developed a desktop application in Java Swing that enables user to plan pixel-art blankets on a grid-like field to quickly determine yarn supplies needed for crochet project.

Crochet Stitch Counter (In-Progress) | **Flask, React, Chrome Extension API** | Began at BCS Hackathon 2025. Creating a Google Chrome Extension which uses the users webcam and computer vision stitch detection models to determine the number of stitches on the row most recently worked on. This enables the user to stitch without counting, which tedious when trying to multi-task with stitching. Currently working on solving issues related to occlusions.