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 She/They

Education

September 2016 - April 2017
[Simon Fraser University](#)
Master of Computing Science,
Big Data Program (*Incomplete*)

Course Highlights:

- Big Data Lab ([Spark](#), [Cassandra](#))
- Big Data Systems ([CUDA](#))

September 2011 - August 2015
[University of Waterloo](#)
Bachelor of Mathematics
Honours Computational Mathematics
Cooperative Program
Combinatorics & Optimization Minor
Computer Science Minor

Course Highlights:

- Computational Linear Algebra
- Computational Geophysics
- Scheduling

Personal Interests

Neuroscience
Cooking
Woodworking
Bad Movies
Board Games
Public Speaking
Burlesque
Drag

Julie Sturgeon

Data Plumber

Technical Experience

[Lead Software Engineer](#) November 2021 - Present
Data Infrastructure Team, Serve Robotics *Remote/Vancouver, BC*

- Architecting a data platform to address organization-wide data needs
- Deploying infrastructure and workflows using Infrastructure as Code on Google Cloud Platform ([Protobuf](#), [Terraform](#))
- Ingesting time-series data from robot operating system and various source systems into data warehouse via streaming and batch-loading ([Dataflow](#), [BigQuery](#), [InfluxDB](#))
- Modelling data and defining metrics to validate the effectiveness of robotics and machine learning systems to provide feedback to engineers and researchers ([dbt](#))
- Identifying and retaining data of interest out of very large volume of robot sensor data for engineering feedback and ML model training ([C++](#))
- Developing tooling which enables operations to ensure data of interest is offloaded across the fleet daily in accordance with data quotas, network bandwidth limitations and operations scheduling ([Python](#))
- Providing guidance on visualization tooling to empower self-serve data insights ([Grafana](#), [ThoughtSpot](#), [Looker Studio](#))

[Data Infrastructure Engineer](#) January 2020 - October 2021
Data Platform Team, Semios Bio *Vancouver, BC*

- Managed a big data warehouse containing over 100 TB of data ([BigQuery](#))
- Maintained a scheduler to reliably process incoming raw data every 10 minutes using rapid micro-batching ([dbt](#), [Python/Prefect](#), [Google Kubernetes Engine](#))
- Optimized complex SQL to reduce cost and query latency
- Developed API to serve to data to customer applications ([NodeJS](#), [MongoDB](#), [GraphQL](#))
- Ensured high data quality through robust testing frameworks

[Applied Researcher](#) August 2018 - May 2019
PAI Health *Vancouver, BC*

- Developed a novel GAN-autoencoder framework to transmit biological signal data in a compact and interpretable form ([Python/Keras](#))
- Worked on neural network compression schemes to make the GAN-autoencoder framework feasible for wearable devices
- Developed a framework for parallelized and resource-efficient batch-training of different neural network architectures and hyperparameters ([Python/Sacred library](#), [AWS Batch](#))
- Prototyped neural network frameworks for continuous blood pressure detection using multiple noisy biological signals as input ([MATLAB](#))
- Read academic papers and kept up-to-date on latest neural network frameworks

[Data Engineer](#) October 2017 - July 2018
O2E Brands *Vancouver, BC*

- Developed and maintained ETL flows ([AWS RedShift](#), [Apache Airflow](#))
- Maintained and updated reporting web portal ([PHP](#), [Javascript](#))
- Produced ad-hoc business analysis and visualization ([Jupyter Notebooks](#), [Plotly](#))
- Coached analysts on software development best practices and programming skills ([Git](#), [R](#))