



shohre\_masoumi@sfu.ca



236-558-1527



shohre73

Simon Fraser University 8888 University Drive, Burnaby, BC V5A1S6



shohre-masoumi

# **Current Position**

#### Research Assistant

Vancouver Institute for Visual Analytics | Sep 2020

• Tableau Extension Development

# Education

# Master's Student | Computer Science

Simon Fraser University | Jan 2019 - Present

- Concentration: Computational Biology
  - Thesis: SigTools: a web-based visualization application that assists in epigenomic signals exploration and interpretation..
- Senior supervisor: Professor Kay C. Wiese

### Bachelor's Degree | Computer Science

Amirkabir University of Technology | 2013–2018

- **Project**: An attempt to create longer contigs for de novo genome assembly by employing both 2<sup>nd</sup> and 3<sup>rd</sup> generation sequencing technology.
  - Supervisor: Professor Fateme Zaremirakabad
- GPA: 3.74
- Ranked 1st among 37

# **Publications**

 Habib Daneshpajouh, Bowen Chen, Neda Shokraneh, Shohre Masoumi, Kay C Wiese and Maxwell W Libbrecht. Continuous chromatin state feature annotation of the human epigenome. Machine Learning in Computational Biology — MLCB (2020).

### In Preparation

- SigTools: Exploratory Visualization for Genomic Signals
  - Shohre Masoumi, Maxwell W. Libbrecht, and Kay C. Wiese

# Notable Projects

### Data Visualization | Grad Level

 Created an interactive visualization for UN water resources data set using the D3 library.

### Data Mining | Grad Level

 Modified RankLib –a library of ranking algorithms– to be able to rank items based on a custom ranking function.

### Data Mining | Grad Level

 Modified RankLib –a library of ranking algorithms– to be able to rank items based on a custom ranking function.

### Systems for Big Data | Grad Level

• Detailed reports on Cassandra and Netflix data storage systems.

#### Database | Undergrad Level

 Developed a web-based accounting application that connected to a SQL database and enabled adding, updating, retrieving and searching the finance records.

### Artificial Intelligence | Undergrad Level

• Python implementations of Genetic Algorithm, hillClimbing, and localSearch for multiple sequence alignment problem.

# Research Interests

- Data Visualization
- Computational Biology
- Human-Computer Interaction

# Conferences

#### **Poster Presentations**

- Canadian Epigenetics, Environment and Health Research Consortium (CEEHRC)
  - **Shohre Masoumi**, Maxwell W. Libbrecht, Kay C. Wiese. *SigTools: Visualizing Genomic Signals*.

#### **Attended**

- IEEE Visualization Conference (VIS) 2019
- 2020 Tableau Conference-ish Virtual
- IEEE Visualization Conference (VIS) 2020 Virtual

# Experience

## **Undergrad Research Mentoring**

Computational Biology Lab | SFU

#### Achievements:

- Assisted in research and programming skills development.
- Provided educational materials and practice scripts.

# **Teaching Assistant**

- Discrete Mathematics I
  - Instructor: Prof. Kay Wiese
- Data Structures and Algorithms
  - Instructor: Prof. Kay Wiese
- Data Structures and Algorithms
  - Instructor: Prof. Valentine Kabanets

#### Achievements:

- Maintained one on one communications with students to understand their problems and support them with accurate solutions.
- Maintained 50-minute tutorials discussing review questions and solutions.
- Provided quick response to emails, questions, and issues.

# Technical Skills

### **General-Purpose**

C • C++ • Python • R

#### Front-end

HTML • CSS • JavaScript • JQuery • D3

#### Back-end

PHP • SQL

#### **Others**

LaTeX • Linux • MATLAB • Microsoft

Office • TensorFlow • Minishift •

Tableau • Shiny

# Awards and Scholarships

- Special Graduate Entrance Scholarship
  - Awarded to outstanding incoming graduate students.
- Graduate Fellowship
  - Awarded on criteria including grades and research ability.
- Graduate Research Travel Award