

TAYAB SOOMRO

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EDUCATION

2020-2022	M.Sc. Agriculture @ Dalhousie University
2015-2020	B.Sc. (Honours) Bioinformatics @ Dept. of Comp Sci, University of Saskatchewan

EXPERIENCE

2023 - 2023	Senior Computational Biologist @ FoodImprover Inc.
2020 - 2023	Computational Biologist @ NRGene Canada Inc.
2020 - 2020	Independent web dev contractor @ Luxsonic Technologies
2019 - 2020	Student Bioinformatician @ AAFC, Saskatoon
2017 & 2022	Teacher Assistant @ U of S & Dalhousie University
2017 - 2019	Student Research Assistant @ Links Lab University of Saskatchewan
2016 - 2017	Institutional IT Consultant @ U of S

COMMUNITY WORK

2020-2023	Judge @ Saskatoon & Annapolis Valley Regional Science Fair.
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AWARDS

2023	1st place recipient of Global Innovation Challenge competition (\$8,600) Heriot-Watt University - Global research, innovation and discovery (GRID), Edinburgh, UK
2023	1st place recipient of 24-hour Startup Hackathon competition (\$9,000) Canada Farm Show, Regina, SK, Canada
2022	1st place recipient of CoHack Hackathon competition (\$3,000) CoLabs, Saskatoon, SK, Canada
2022	1st place recipient of Med.Hack(+) hackathon competition Med.Hack(+), Saskatoon, SK, Canada
2019	1st place recipient of Ag Hackathon Award Emerging Agriculture, Saskatoon, SK, Canada
2018	Undergraduate Student Research Assistantship (USRA) Award Department of Computer Science, University of Saskatchewan
2015	1st place recipient of Programming Contest at Dept. of Comp Sci University of Saskatchewan

SOFTWARE DEVELOPMENT PROJECTS

2020	MICAS – <i>MinION Classification & Altering System</i> <ul style="list-style-type: none"> Developed a web-based platform to issue real-time alerts of particular DNA sequences with Nanopore sequencing run GitHub: https://github.com/coadunate/MICAS
2020	MedCast360 @ Luxsonic – <i>Immersive Video-sharing platform</i> <ul style="list-style-type: none"> Designed, developed and maintain a web platform for healthcare workers to share VR instructional videos Website: https://medcast360.com/
2020	GenoAssist – <i>CLI tool for genome assembly automation</i>

- Developed a GoLang-based CLI for automating the genome assembly and reporting
 - GitHub: <https://github.com/genoassist/genoassist>
- 2018 – 2019 OR Huddle – *Software solution for surgeons.*
- Developed a ReactNative application for a surgeon to use with his staff.

MACHINE LEARNING PROJECTS

- Soomro T, Singh A. (2020). *Progress assessment of scrum daily meetings using NLP and machine learning.*
- Soomro T, Singh A. (2020). *Predicting COVID-19 case numbers in Canada based on Twitter data.*
- Soomro T, Singh A. (2020). *Comparison between SumBasic and Seq2Seq Auto Text-Summarization Techniques.*

PUBLICATIONS

- Soomro T, Jordan M, Watts S, Migicovsky Z, Forney C, Song J, Myles S. (2023). **Genomic insights into apple aroma diversity.** Fruit Research. doi: 10.48130/FruRes-2023-0027
- Obshta O, Zabrodski MW, Soomro T, Wilson G, Masood F, Thebeau J, Silva MCB, Biganski S, Kozii IV, Kozii RV, Raza MF, Jose MS, Simko E, Wood SC. (2023). **Oxytetracycline-resistant Paenibacillus larvae identified in commercial beekeeping operations in Saskatchewan using pooled honey sampling.** Journal of Veterinary Diagnostic Investigation. <https://doi.org/10.1177/10406387231200178>
- Soomro T, Watts S, Migicovsky Z, Myles S. (2022). **Cider and dessert apples: what's the difference?** Plants, People & Planet. <https://doi.org/10.1002/ppp3.10284>

INVITED TALKS

- Falling Walls Lab Atlantic Canada (2023). **Breaking the wall of diagnostic roadblocks.**
- Canadian Society of Horticulture Science Annual General Meeting (2022). **The aroma of apples.**
- Kentville Research & Development (KRDC) Series (2022). **Exploring the genetic basis of aroma production in apples.**
- Institute of Comparative Genomics (ICG), Dalhousie University (2022). **Introduction to pan-genomes and how to create one?**
- UC Davis Plant Sciences Symposium (2022). **The genetics of apple aroma.**
- Institute for Comparative Genomics (ICG), Dalhousie University (2022). **Understanding the genetic basis of aroma production in apples.**

CONFERENCES ATTENDED

- Falling Walls Lab Conference 2023
 - Halifax, Nova Scotia Canada
- Uniting The Prairies (UP) 2023
 - Saskatoon, SK, Canada
- UC Davis Plant Sciences Symposium 2022
 - Davis, California, United States
- Genomes of Animals & Plants (GAP) Conference 2022
 - Virtual Conference
- Plant and Animal Genomes (PAG) Conference 2022
 - San Diego, California, United States

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- American Association for the Advancement of Science (AAAS) Conference 2020
 - Seattle, Washington, United States
 - Mobilizing the Plant Phenotyping and Imaging Research Centre (P²IRC) Symposium 2018
 - Saskatoon, Saskatchewan, Canada
 - Annual Plant Phenotyping and Imaging Research Centre (P²IRC) Symposium 2017
 - Saskatoon, Saskatchewan, Canada

POSTER PRESENTATIONS

- Masood F, Thebeau J, Soomro T, Bezerra S.M, Jose M.S, Obshta O, Biganski S, Markova S, Camilli M, Raza M.F, Simko E, Ruzzini A, Wood S. (2023). **Antibiotic resistance and genomic characterization of North American *Melissococcus plutonius* isolates.** WCVN Graduate Student Poster Day, Saskatoon, SK
- Obshta O, Zabrodski M. W, Soomro T, Wilson G, Masood F, Thebeau J. M, Silva M. C. B, Biganski S, Kozii I, Kozii R, Raza M. F, Jose M. S, Camilli M, Markova S, Moshynskyy I, Ruzzini A, Simko E, Wood S. C. (2023). **Genetic determinants of oxytetracycline resistance in *Paenibacillus larvae* from Saskatchewan beekeeping operations.** WCVN Graduate Student Poster Day, Saskatoon, SK, Canada
- Soomro T, Jordan M, Watts S, Migicovsky Z, Forney C, Song J, Myles S. (2021). **Harvest Date Shapes Apple Volatilome.** Plant and Animal Genomes Conference, San Diego, CA, USA
- Soomro T, Napper S, Bonham-Smith PC. (2020). **Investigation of the *Arabidopsis thaliana* kinome after infection with *Plasmodiophora brassicae* and establishment of clubroot.** American Association for the Advancement of Science, Seattle, WA, USA
- Soomro T, Links MG. (2018). **Increased Usability of the MinION.** Mobilizing the Plant Phenotyping and Imaging Research Centre Symposium, Saskatoon, Canada
- Soomro T, Links MG. (2018). **Sequence & Forget: A new paradigm for MinION DNA Sequencing.** Research Fest: Department of Computer Science, Saskatoon, Canada
- Dowhy T, Soomro T, Links MG. (2018). **Interactive Exploration of Base-calls in Nanopore Data.** London Calling 2018, London, United Kingdom
- Dowhy T, Soomro T, Links MG. (2017). **Visualization of Nanopore Data with API Access to Data.** Nanopore Community Meeting, New York City, NY, USA
- Dowhy T, Postnikoff DL, Soomro T, Town JR, Ready, Dumonceaux TJ, Links MG. (2017). **Base-Call Event Detection on Nanopore Data Using Wavelets.** Annual Plant Phenotyping and Imaging Research Centre Symposium, Saskatoon, Canada
- Dowhy T, Ready B, Soomro T, Armitage A, Links MG. (2017). **Configuring Virtual Toolboxes with Ansible.** Annual Plant Phenotyping and Imaging Research Centre Symposium, Saskatoon, Canada