

BRIAN CECHEMANEK

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Data Scientist and Medical Researcher

Meticulous **Big Data Researcher** leveraging the scientific approach to computational problems. Applies mechanical/biomedical engineering experience with inquiry-based medical and bioinformatics research to solve large-scale problems. Organizes between multiple on-going assignments, projecting for both short-term and long-term deadlines. Constantly improving programming and computer science skills, for application to finance, research, and personal projects.

Core competencies - Data Procurement, Processing, & Analysis - MATLAB - Presentations
Scientific Method - Experimental Design - Design & Engineering - Project Management

Professional Experience

Biologist - SFN Biosystems Inc.

Calgary AB - Aug.2012-Dec.2013

Designed and built the world's largest enclosed PhotoBioReactor (to-date) for the mass sequestration of carbon emissions through the growth of algae with potential for high-value end-product creation.

Managed biology laboratory duties including cell culture/maintenance, diagnostics, analytical testing, and **large-scale data collection/analysis**. Acted as main Liaison between Engineering and Biological departments. Engaged in investor activities, including fundraising and grants.

COO - Mechanical Engineering & Fabrication

Calgary AB - Mar.2006-Present

Co-founder/Co-owner - 1248812 Alta Ltd., a fabrication, inspection, and product design engineering company specializing in physical separators and filtration packages for the natural gas sector.

Responsible for product design, materials sourcing, fabrication, sales, and financials. Daily workflow included stainless and aluminum welding and fabrication, on-site inspections, drafting and P&IDs.

Research Experience

Graduate Student - Functional Magnetic Resonance Imaging

Calgary AB - 2014-2016

Investigated brain differences in children and adolescents with Autism Spectrum Disorders using functional connectivity measures in the brain.

Computational analysis of the largest ever publicly available database of fMRI images. Wrote in-house software (MATLAB, Python, Excel) to **Analyze in excess of 15,000,000 data points**.

Honours Student - Novel Therapeutics for Ischemic Stroke

Calgary AB - 2010-2011

Developed a novel, very mild hypothermic protocol and apparatus for improved outcomes following ischemic stroke.

Designed and built a temperature regulation system with capacity for 6 animals at a time. **Logged and processed ~75,000 data points per animal**. Performed microsurgery model of stroke, histology, immunohistochemistry, and data analyses. Resulted in **peer-reviewed publication**.

Education

MSc Candidate - Biomedical Engineering - University of Calgary

May.2016

Bioinformatics, Image Processing, Biomedical Engineering, and Professional Development.

BHSc (Hons) - Biomedical option - University of Calgary

May.2011

Cellular Microbial Molecular Biology, Virology, Human Anatomy/Physiology, Organic Chemistry, Biochemistry, Cellular Biology, Statistics, and Independent Research.

Social

