

QUALIFICATIONS

- Managed LiDAR and Photogrammetric projects in Canada and USA: Fixed wing, Rotary wing, UAV.
- Proficient in Imagery and LiDAR data Pre-Processing and Post-Processing:
 - ❖ Photogrammetric Aerotriangulation: INPHO, Correlator3D, Pix4D.
 - ❖ Ground and Aerial Trajectories: Inertial Explorer, GrafNav, POSPac MMS, IPAS.
 - ❖ Laser Point Cloud: Riegl RiACQUIRE, RiPROCESS, Leica CloudPro.
 - ❖ Geodetic Control Networks: GrafNet, Leica Infinity.
 - ❖ Orthophoto and Map Products: OrthoMaster, OrthoVista, Global Mapper, QGIS, Microstation, TerraScan, TerraModeler, AutoCAD Civil 3D.
- 8 years of experience installing, configuring, operating, and troubleshooting LiDAR and Photogrammetric sensors (Riegl VQ 1560i, VUX-1UAV. Leica ALS60, ALS70. Optech ALTM 3100, Galaxy), IMUs, GNSS receivers, gyro stabilizers, total stations.
- Programming proficiency: C++, Matlab, JavaScript, HTML, SQL Server.
- Motivated to maintain client satisfaction (excellent interpersonal skills).
- Languages: English, Spanish and Portuguese.

PROFESSIONAL LICENSES

Professional Engineer – Alberta, Canada - License #123925

Project Management Professional – USA - License # 3022635

Licensed Surveyor in Training – California, USA - License # 8874

WORK EXPERIENCE

Towill, Inc.

Senior Geomatics Analyst

Concord, CA USA

October 2021 - Present

- Aerotriangulate Film and Digital Imagery.
- Orthophoto production.
- Use of Terrestrial and Aerial LiDAR data to create geospatial products, including InRoads DTMs, AutoCAD Civil 3D surfaces, and multiple DEM formats.
- Digital volumetric computations.

Towill, Inc.

Geomatics Analyst

Concord, CA USA

February 2019 - October 2021

- Generate Cross Sections from digital models for Engineering monitoring projects.
- Prepare Horizontal and Vertical Accuracy Reports for LiDAR point clouds and Orthophotos.
- Use GIS and CAD modeling software to interpret, edit, digitize and format processed data for mapping project objectives.
- CAD Drafting for Conventional Surveying projects.

RME Geomatics

Team Lead

Calgary, AB Canada

July 2018 – December 2018

- Lead Calgary's office for Western Canada projects.
- Coordinate Aerial Survey projects with clients.
- Project Planning: Flight planning, Control Networks, Logistics.
- Lead Aerial Photogrammetric and LiDAR Surveys: Fixed wing, Rotary wing, UAV.
- Processing of LiDAR point clouds, Control Networks adjustments.
- Photogrammetric Aerotriangulation.

Airborne Imaging, Inc.

LiDAR Project Manager

Calgary, AB Canada

April 2016 – July 2018

- Responsible for all aspects of acquisition phase of Airborne LiDAR and Photogrammetric surveys.
- Supervise and allocate field resources daily, including personnel (Geomatics Field Technicians, Pilots, AMEs & Sub-Contractors).
- Preliminary processing of LiDAR, GNSS and INS data collected to ensure completeness and accuracy before crew demobilization, including:
 - ❖ Processing of flight trajectories.
 - ❖ Generation of LiDAR point cloud data.
 - ❖ Sensor Calibration.
- Design, process and implement Geodetic Control Networks.
- Process GNSS Ground Truth data to ensure Airborne data meets contractual requirements.
- Design and modify flight plans for LiDAR projects.
- Preparation of daily project statistical reports for the Field Operations Manager.
- Maintain communications with local client representatives and government regulatory agencies, including promoting the company to the various agencies.

Airborne Imaging, Inc.
Geomatics Field Technician

Calgary, AB Canada
May 2013 – April 2016

- LiDAR trajectory and point cloud data processing.
- Processing of GNSS Static and Kinematic Aerial/Ground data.
- Install, operate, and troubleshoot LiDAR Airborne sensors.
- Responsible for directing Aerial Survey missions, including:
 - ❖ Adjusting and Interpreting LiDAR, GNSS, INS real-time data feeds.
 - ❖ Monitoring atmospheric conditions for optimal data collection.
 - ❖ Monitoring aircraft's navigation parameters.
- Required to spend as many as 12 hrs/day in an aircraft performing Aerial Surveys.
- Responsible for collecting GNSS Ground Truth kinematic data.
- Responsible for the deployment of GNSS base stations for static data collection in support of Aerial Surveys.
- Develop web applications to improve field operations reporting.

EDUCATION

Civil Engineering

Doctor of Philosophy

Purdue University

August 2022 – 2025

Geomatics Engineering

Master of Science

California State University, Fresno

2020 – 2022

Geomatics Engineering

Bachelor of Science

University of Calgary

2010 – 2014

ACADEMIC

A Comparative Accuracy Analysis of 3D Model Programs – A Case Study of SfM and Photogrammetry Based Programs - May 2022, SaLIS Journal

ASPRS 2021 Annual Conference – Presenter

42nd Annual Virtual Central California Research Symposium 2021 – Presenter

35th CSU Systemwide Student Research Competition 2021 – Presenter

60th Annual Geomatics Engineering Conference 2021 – Presenter

HONORS & AWARDS

The Honor Society of Phi Kappa Phi: Love of Learning Award – August 2022

California Transportation Foundation Graduate Scholarship – May 2022

American Association for Geodetic Surveying Graduate Fellowship – April 2022

Western Regional Survey Conference: Leica Geosystems Scholarship – April 2022

California Land Surveyors Association San Francisco Chapter Scholarship – February 2022

CLSA Orange County Chapter Past Presidents Scholarship – February 2022

CLSA San Diego Chapter Jas Arnold Memorial Scholarship – February 2022

CLSA Central Coast Cliff Lewis Memorial Scholarship – February 2022

ASPRS Francis H. Moffitt Memorial Scholarship – January 2022

American Council of Engineering Companies SJVC Scholarship – December 2021

League of California Surveying Organizations Scholarship – August 2021

ASPRS Pacific Southwest Region Scholarship – July 2021

CSU-Fresno Slavoj Scholarship – June 2021

CSU-Fresno Robert & Norma Craig Graduate Scholarship – May 2021

ASPRS Robert E. Altenhofen Memorial Scholarship – February 2021

CLSA Education Foundation Scholarship – February 2021

CLSA James E. Adams Memorial Scholarship – February 2021

Geomatics Engineering Foundation Award – January 2021

Lyles College of Engineering Funded Research Award – September 2020

Airborne Imaging, Inc. Chairman's Award – November 2017

CIVIC/VOLUNTEER EXPERIENCE

Western Regional Survey Conference

Official Workshop Moderator

Regional US Conference

March 30 - April 2, 2022

Geo Week/American Society for Photogrammetry and Remote Sensing Annual Conference

Official Workshop Moderator

International Conference

February 6 - 8, 2022

American Society for Photogrammetry and Remote Sensing – Student Advisory Council

Chair

Nationwide (United States)

October 2022 – Present

American Society for Photogrammetry and Remote Sensing – Student Advisory Council

Vice Chair

Nationwide (United States)

August 2021 – October 2022

American Society for Photogrammetry and Remote Sensing – Student Advisory Council

Education & Professional Networking Chair

Nationwide (United States)

March 2021 – October 2021

Monumental Toy Drive

Outreach Director

Concord, CA USA

December 2019 – Present

Local Community Groups

Coordinator/Session Leader

USA/Canada

February 2017 – Present

Samaritan's Purse International Relief

Calgary Flood Disaster Relief Volunteer

Calgary, AB Canada

June 2013 – July 2013

Geomatics Engineering Students Society

Career Day Commissioner

Calgary, AB Canada

September 2012 – April 2013

The Mustard Seed

Poverty Alleviation Volunteer

Calgary, AB Canada

March 2013 – May 2013