DIVYA BHAVSAR

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SUMMARY OF QUALIFICATIONS

Aspiring GNSS Algorithms Engineer with a strong foundation in geomatics, satellite positioning, and data analysis. Proficient in Python for GNSS algorithm development and statistical evaluation. Academic background in C++ programming. Experienced with GNSS field testing using NovAtel/u-blox receivers, RINEX and ephemeris data processing, and error analysis. Collaborative, analytical, and passionate about high-precision positioning technologies.

EDUCATION

MASTER'S DEGREE | MEng Geomatics Engineering | University of Calgary, Canada 2024 – 2026 (Expected)

GPA: 4 / 4 (Winter 2025) || 3.85 / 4 (Fall 2024)

BACHELOR'S DEGREE | B.E Computer Engineering | Gujarat Technological University, India 2019 – 2023

CGPA: 8.95 / 10 *(First Class with Distinction)*

ACADEMIC PROJECTS

GNSS & Satellite Positioning| University of Calgary 2025

- Developed a Python-based solution for GPS positioning using Single Point Positioning, single difference, and elevation weight matrix via epoch-by-epoch least squares estimation.
- Processed RINEX, satellite ephemeris, CSV and Excel files; computed satellite trajectories using precise and broadcast ephemeris data, generated sky plots and analysed positional errors by comparing almanac, ultra-rapid, and best-matching records against precise ephemeris.
- Evaluated GNSS multipaths, cycle slips through field tests with NovAtel and u-blox receivers; used CMC analysis to assess impact of receiver quality and antenna placement.
- Applied CSRS-PPP for high accuracy post-processing and explored GPS meteorology applications.

Photogrammetry | University of Calgary - Coursework 2025

- Gained strong knowledge of optics, image orientation, aerotriangulation, collinearity equations, and relief displacement; applied concepts in relative & absolute orientation, bundle adjustment, intersection & backprojection; hands-on experience with designing normal matrix, unified least squares, flight planning & aerial surveys (strips & number of images per strip).

Geomatics Projects | GIS Analyst | University of Calgary Dec 2024

- Performed watershed analysis using hydrological tools (Flow Direction, Accumulation) and LULC classification using raster data and supervised image classification.
- Conducted change detection (for Calgary, Jasper wildfire impact) and buffer analysis for fire station accessibility using ArcGIS Pro and satellite imagery.

Data Processing & Analytics 2025

- Created interactive dashboards using Excel's Pivot Tables, Charts, Slicers, and VBA Scripting; automated data workflows with Macros; applied advanced functions and statistical formulas for analysis; and implemented data cleaning and formatting techniques.

TECHNICAL SKILLS

Programming: Python (Matplotlib, Pandas, Numpy) | C++ (academic foundation, currently upskilling) | SQL | Github | React | HTML/CSS

GNSS & Algorithms: GNSS Data processing | Least Squares Estimation | Rinex/ephemeris processing | Satellite/Receiver Positioning |Single Point Positioning | Single Differencing | Double Differencing | Elevation Weight Matrix | Error analysis | DOP calculation | Basic knowledge of Kalman filtering

Photogrammetry & Geomatics: Flight Planning | Normal Matrix Design | Unified Least Squares | Bundle Adjustment | Relative & Absolute Orientation | Intersection & Backprojection | LULC Classification | Change Detection

Software/Tools: ArcGIS Pro | MS Excel | VS Code

Other: Data visualization (Pivot Tables, Dashboards, VBA, Charts, Conditional Formatting, Data cleaning/validation) | Teamwork | Technical communication | Problem solving | Analytical thinking | Time management | Good observer & listener

Available to begin full-time employment starting May 2026 upon completion of Masters degree.