

## GEOMATE INNOVATION HIGHLIGHT

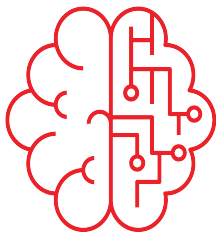


### COMPANY OVERVIEW

GeoMate is a mapping service that leverages Artificial Intelligence (AI) and geospatial technology to analyze near-real time safety and accessibility of cities.

**LOCATION:** WATERLOO, ON

### Technology



### Artificial Intelligence

### MUNICIPAL MOBILITY CONCERNS

Every day, there are 6 pedestrians killed in crashes with vehicles, and over 120,000 people fall or slip on sidewalks. Most of these accidents occur due to infrastructure problems, including poor curb cuts, lack of visibility, obstacles, narrow walkways, steep slopes which ice over, and so on. The same obstacles have also been found to be the root cause of inaccessibility for people with disabilities. Note that one billion people around the world live with some form of disability. Municipalities are currently taking great strides towards better infrastructure but require the ability to identify barriers to mobility as they appear, so they can be dealt with in real-time.

### TO MAKE THE WORLD ACCESSIBLE AND WALKABLE FOR EVERYONE

GeoMate leverages AI and geospatial technologies to address mentioned problems. GeoMate provides two geospatial mobility assessment platforms- AccessMate (Walkways Accessibility Assessment) and InsureMate (Pedestrian collision Risk Assessment). AccessMate helps municipalities prioritize repairs for the most concerning walkways and helps individuals with mobility concerns to safely navigate shared spaces. InsureMate is used by financial firms to properly price location-based risk for automotive insurance. In addition, using InsureMate, autonomous vehicles and traffic engineering teams can highlight "danger zones" for potential accidents with pedestrians.

### PLATFORM SCALING AND AI TRAINING

By completing a project on the CENG Testbed, GeoMate evaluated the performance, stability and scalability of its accessibility platform, AccessMate. They optimized their solution's resource usage and now understand the requirements needed to grow their capacity to serve ten clients concurrently. This is an important metric to ensure they can support their 18-month projected growth goals.

Beyond scaling, GeoMate leveraged CENG's Nvidia Tesla V100 GPUs to conduct different AI training schemes, increasing the accuracy of AccessMate's urban features' detection by 14%. This improvement further solidifies GeoMate's objective to provide the best information to their clients.

**"This support expanded our horizons on upcoming business opportunities and helped us to be better prepared on scaling the services."**

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