

CONTEXT-AWARE GEOGRAPHIC INFORMATION SYSTEMS FOR MONITORING AND PREDICTING TRAFFIC COLLISIONS

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Preliminary PhD research

OUTLINE

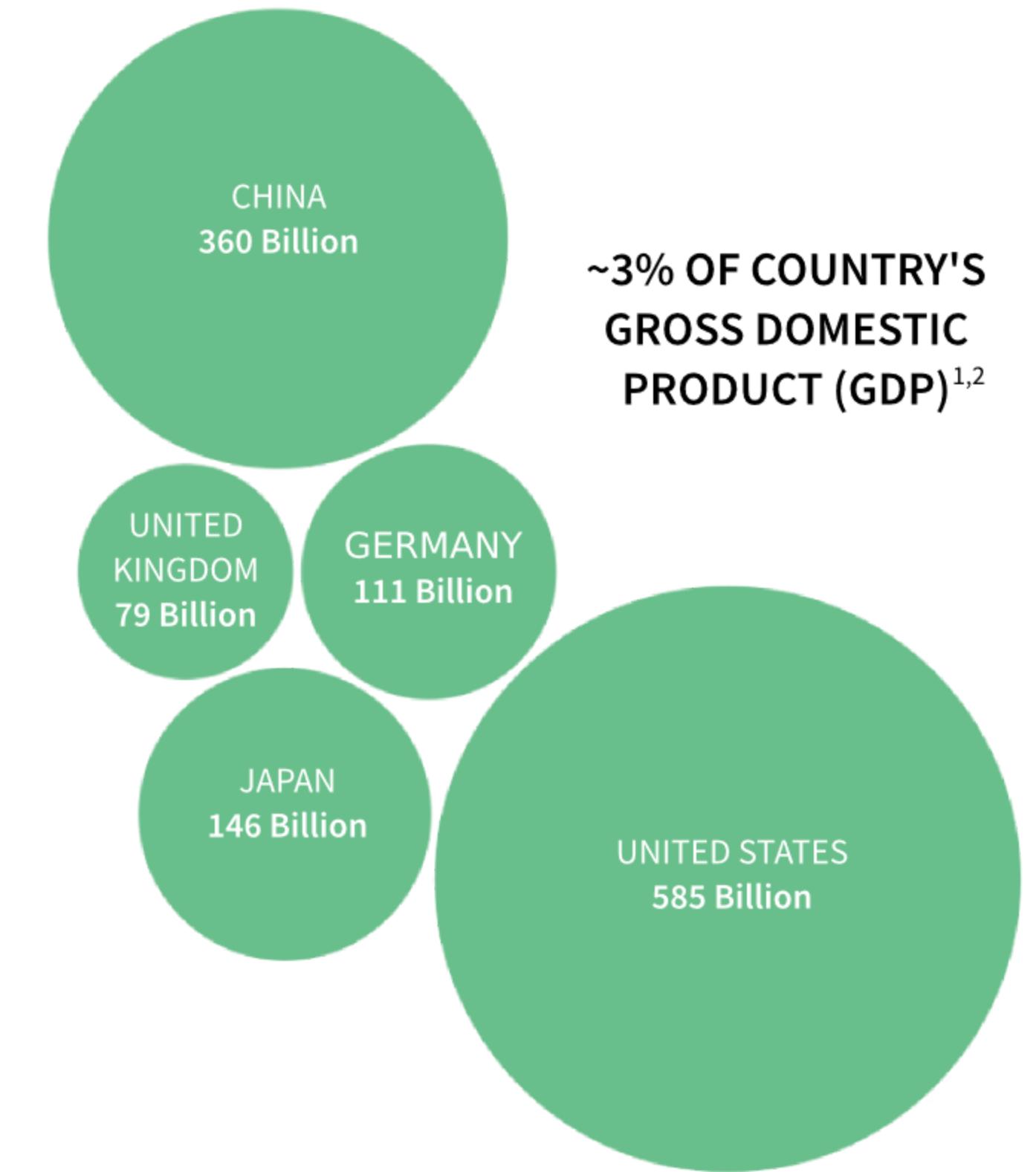
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4. References

1. INTRODUCTION



OVER 3700 TRAFFIC COLLISIONS EVERY DAY¹







OVER A MILLION LIVES LOST EVERY YEAR¹

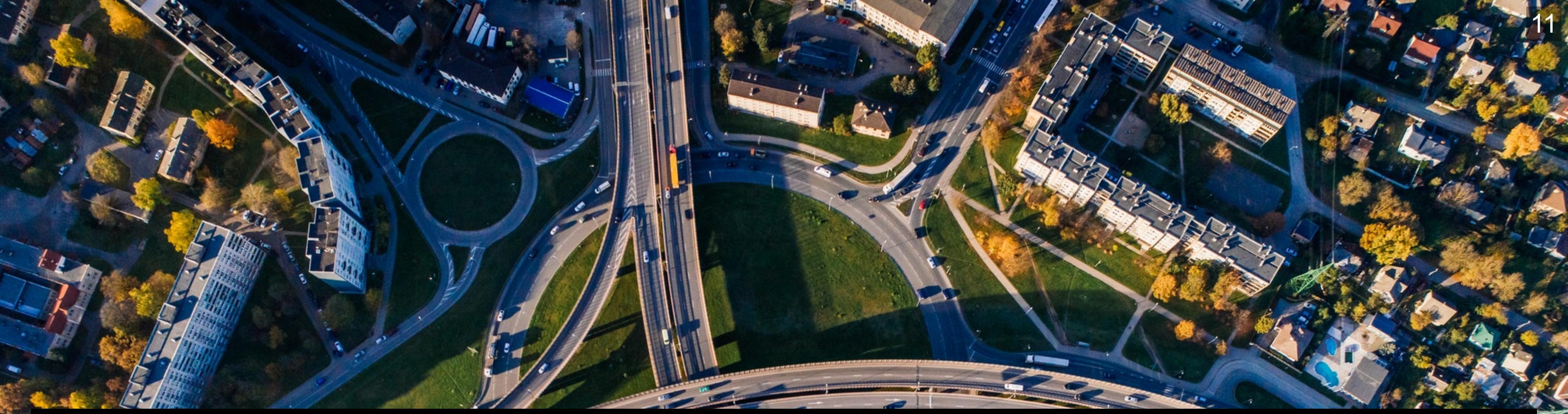
PRICELESS

PREVENTION EFFORTS



LAWS, POLICIES, RULES, REGULATIONS





INFRASTRUCTURE AND DESIGN

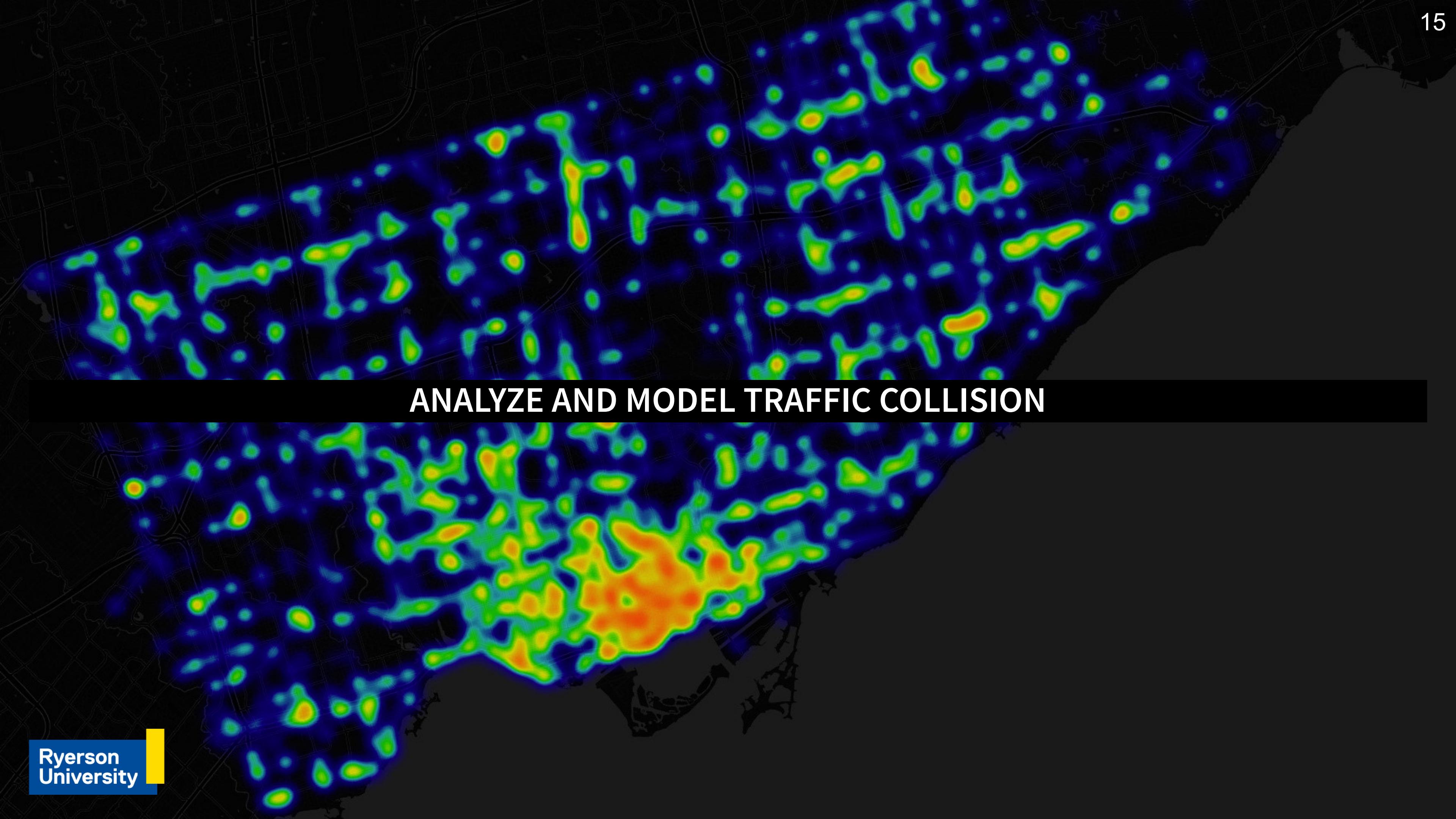


PROBLEMS

- Planning and Decision Making
- Resource Allocation
- Human Behaviour

2. RESEARCH

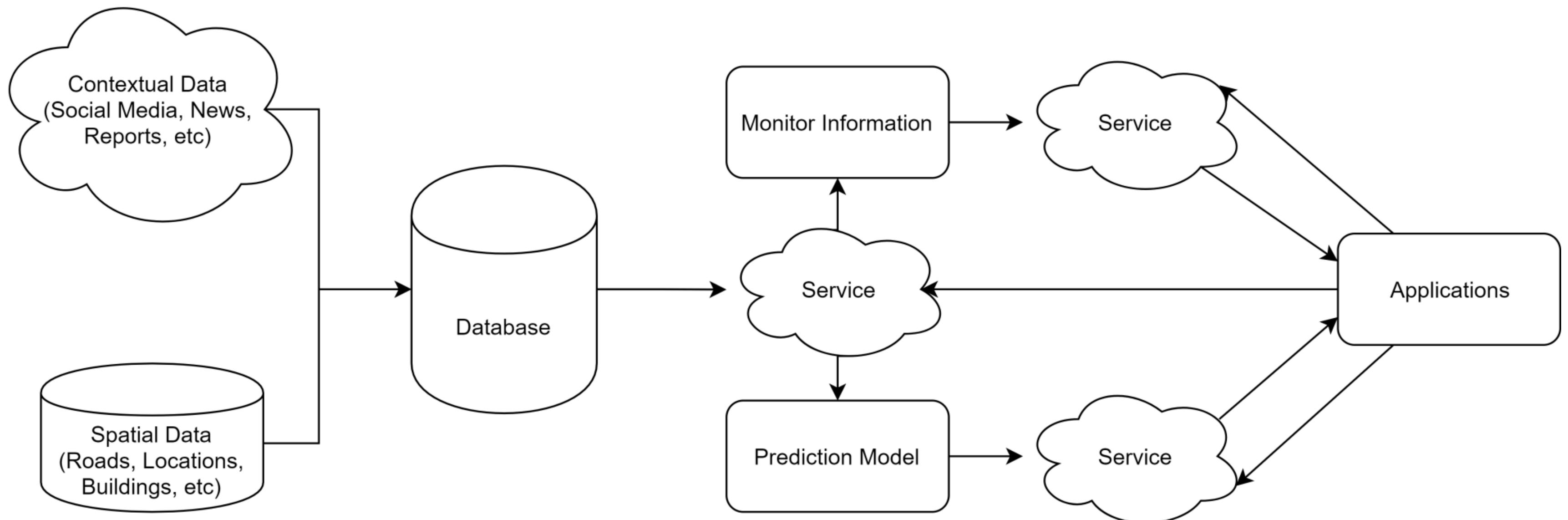
COLLECT AND MONITOR TRAFFIC COLLISION DATA



ANALYZE AND MODEL TRAFFIC COLLISION

USE CONTEXTUAL DATA





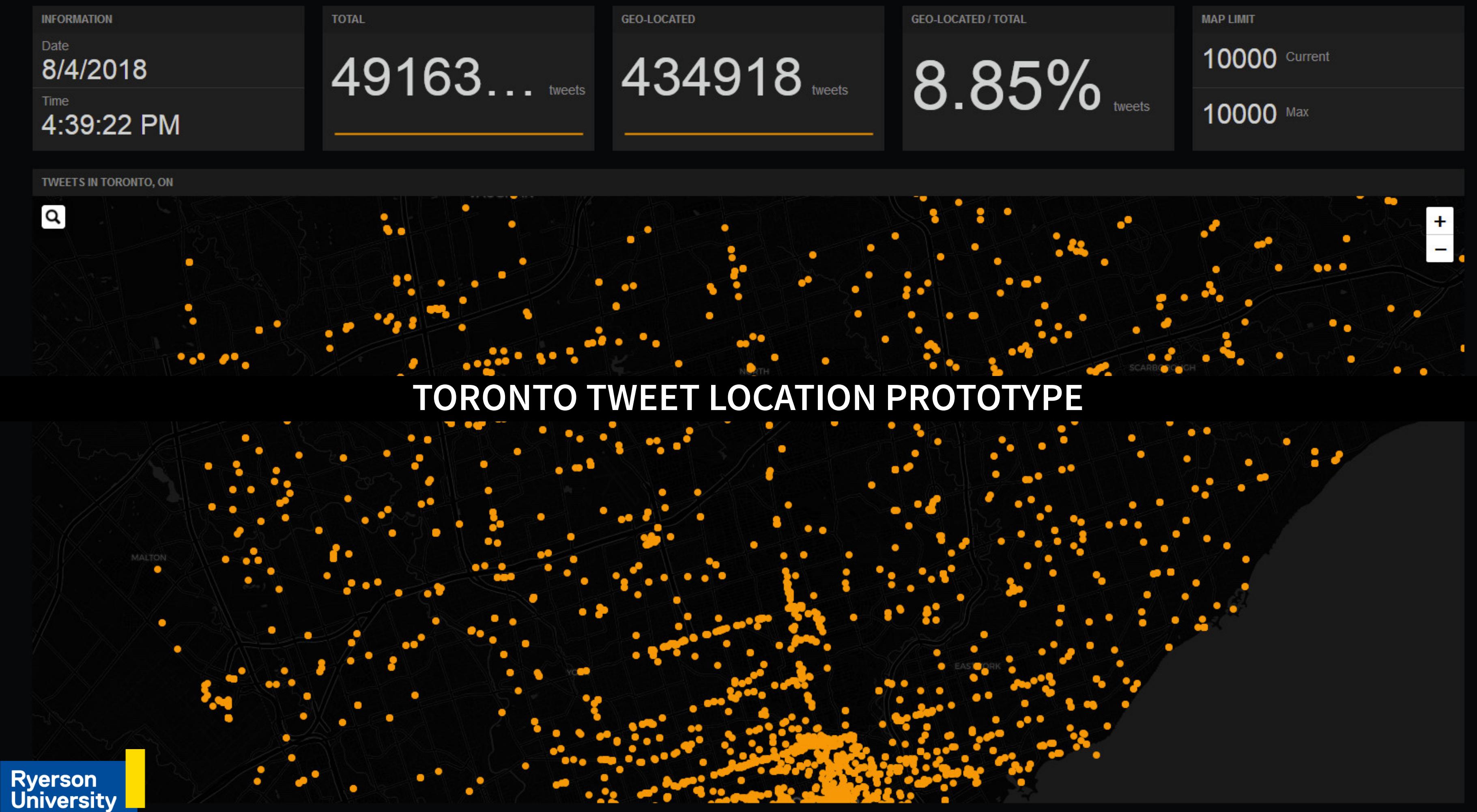
RESEARCH OBJECTIVES

1. Discover an approach to use frequent and large amounts of contextual data in GIS
2. Develop a context-aware GIS for predicting and monitoring traffic collisions

RESEARCH CONTRIBUTIONS

1. Approach for using generic contextual data with GIS
2. Architecture for context-aware GIS
3. Conceptual framework for building context-aware GIS solutions

3. CURRENT WORK



express-mongodb-rest

3.1.0 • Public • Published a year ago

Readme

1 Dependencies

0 Dependents

13 Versions

express-mongodb-rest

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- [Documentation](#)
- [Changes](#)

Express middleware for MongoDB REST APIs

[npm package](#) 3.1.0 [build](#) [passing](#) [coverage](#) 94% [downloads](#) 1k [license](#) MIT

install

> npm i express-mongodb-rest

± weekly downloads

23



version

3.1.0

license

MIT

open issues

pull requests

Install

1. Install [MongoDB](#)
2. Install [Node.js](#)
3. Install [express](#) and [express-mongodb-rest](#) via `npm`
4. **Recommended:** Install [dotenv](#) to load environmental variables

```
npm install --save express express-mongodb-rest
npm install --save dotenv
```

For the latest developer version, see [Developer Install](#).

homepage

github.com

repository

 [github](https://github.com/rrwendev/express-mongodb-rest)

last publish

a year ago

collaborators



 [Test with RunKit](#)

[Report a vulnerability](#)

Usage

This package provides a flexible, customizable, and low-dependency Representational State

Transfer (REST) Application Programming Interface (API).

PAPERS

- Published review paper with Shishuo Xu and Dr. Songnian Li on traffic event detection with geosocial media
- Literature review of traffic collision prevention with GIS

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REFERENCES

- ¹ World Health Organization (2018). Global status report on road safety 2018.
- ² International Monetary Fund (2018). Countries with the largest gross domestic product (GDP) 2017 (version). Retrieved from <https://www.statista.com/statistics/268173/countries-with-the-largest-gross-domestic-product-gdp/>