

# Nate Wessel

nate.wessel@mail.utoronto.ca  
1-740-337-6510  
NateWessel.com

## Education

- PhD** in Urban Planning ..... 2015 - 2019  
*University of Toronto*  
Dissertation: *Accessibility Beyond the Schedule*
- MA** in Geography ..... 2013 - 2015  
*University of Cincinnati*  
Thesis: *Discovering the Spacetime Dimensions of Schedule Padding and Delay From GTFS and Real-time Transit Data*
- Bachelor of Urban Planning** ..... 2007 - 2012  
*University of Cincinnati*,  
College of Design, Architecture, Art & Planning

## Technical Skills

- Expert:** Python, SQL, PostGIS, QGIS, Javascript, R, OpenStreetMap, JOSM, HTML, CSS, SVG, Inkscape
- Proficient:** L<sup>A</sup>T<sub>E</sub>X, PhP, Git, RegEx, OpenTripPlanner, OSRM, Wordpress, OpenOffice & Microsoft Office
- Familiar:** D3, ArcMap, GRASS, Leaflet, GIMP, Slurm

## Communication Skills

I have been *writing* and *publishing* actively since 2009 when I had a regular opinion column in a local paper. Since then I have written numerous technical papers (see below), contributed dozens of articles to urban-planning blogs, and self-published and distributed more than 65,000 paper maps.

I also have extensive experience with *public speaking*; I have given numerous lectures in undergraduate courses, led large lab tutorial sessions, presented at a dozen academic conferences, and participated in various other public talks and panel discussions.

## Publications

First author on 5 peer reviewed academic publications in GIS, transport planning, and cartography; co-author on 2 additional peer reviewed publications ([Academic CV](#))

Self-published the [Cincinnati Transit Map](#) in 2011 after raising more than \$3k to print and distribute 55,000 paper maps in three editions.

Self-published the [Cincinnati Bike Map](#) in 2015 after raising more than \$7k to print and distribute 9,000 paper copies.

## Work Experience

### Researcher 2015 - 2019

From 2018 - 2019 I worked for Dr. Widener at the *University of Toronto*, designing and coding a custom Python application for segmenting travel survey GPS trajectories into trips and activity locations. I also supervised an undergraduate computer science research assistant.

In 2018 I consulted for Dr. Pereira at the *University of Oxford*, customizing code developed for my dissertation.

From 2015 - 2017 I conducted research for Dr. Farber at the *University of Toronto*, writing and analysing code, scheduling super-computing resources, conducting geospatial analysis, and producing two academic papers.

### Course Instructor 2018

*University of Toronto, Scarborough*  
Designed and taught a course on *spatial analysis* to 20 third and fourth year undergraduate GIS students. Gave 10 lectures; wrote and administered 2 exams; supervised a TA; designed and administered 5 assignments.

### Teaching Assistant 2013 - 2019

*University of Toronto & University of Cincinnati*  
Throughout graduate school I worked as a teaching assistant for graduate and undergraduate classes in GIS, geography, planning, and Earth sciences.

### Consulting Designer 2012 - 2015

*Vesalius Design*  
Between undergrad and my PhD I worked freelance on numerous cartography and data visualisation projects, mostly for the *Cincinnati Chamber of Commerce*. I also designed and produced bespoke clothing for several clients.

### Office Automation Clerk 2012

*USDOT, Bureau of Transportation Statistics*  
As a co-op student I helped to develop a web-based data API in PhP and demonstrated basic JavaScript visualisations based on the API to senior management. I also assisted in the redesign/wireframing of [bts.gov](#) and documented internal data management processes for the *Office of Airline Information*.

## Leadership Experience

### Board Member 2009 - 2012

I served in several roles for *GLSEN Greater Cincinnati* including *volunteer coordinator* and *director of operations*. I recruited, trained, and managed more than 75 volunteers, oversaw the all fundraising for a \$50k+ annual budget, represented the organization at national conferences, and oversaw the design and production of all communications materials.

### Volunteer Coordinator 2009

As a board member of *Cincinnati Pride* I identified, contacted and managed more than 50 volunteers leading up to and during 3 full days of Pride festivities.