## WORK EXPERIENCE

• Graduate Research Assistant, University of North Carolina, Charlotte

Fall 2020 - present

Phone: (704) 281-0284

Transit Development and Neighborhood Change Project, funded by North Carolina Department of Transportation

E-mail: fhatami@uncc.edu

- Improve the data processing efficiency by automating the cleaning and classification of spatiotemporal data of building permits and land subdivisions in Mecklenburg County between 1990 to 2019 utilizing Python, R and ArcGIS software
- o Conduct text cleaning and geocoding of over 400,000 spatiotemporal data records
- Graduate Research Assistant, University of North Carolina, Charlotte

Summer 2021 - present

- UNCC BRIC Nutrition Security Project, Department of Public Health Science
- o Conduct exploratory data analysis on UNCC students' food purchases temporal data utilizing R.
- $\circ\quad \text{Develop interactive visualization reports for UNCC students' food purchases temporal data utilizing } R.$
- o Implement multivariate analysis to examine food and beverage purchasing choices among college students.
- Graduate Research Assistant, UNCC School of Data Science, Charlotte
  <u>COVID19 Visualization Dashboard Project</u>, in collaboration with Wells Fargo Bank http://sds-covid.uncc.edu/

Summer 2020

- Generated automated scripts to collect, clean, preprocess and analyze raw Covid19 data in US counties on a daily basis using R statistical software
- Generated automated scripts to conduct hotspot analysis on Covid19 measures in US counties on a daily basis using Getis Ord Gi\* Statistic method in R statistical software
- o Generated automated scripts to conduct cluster analysis on Covid19 measures in US counties on a daily basis using AMOEBA optimization-based algorithm in R statistical software
- Assisted data visualization of COVID19 daily measures, hotspot analysis, cluster analysis and social distancing measure
- Assisted Covid19 forecast ensemble modeling for enhancing prediction performance
- o Implement Spatial SEIR Covid19 prediction model in R statistical software
- Utilized cellphone mobility big data for enhancing the Covid19 prediction performance by incorporating human interactions
- Graduate Research Assistant, University of North Carolina, Charlotte
  State Energy Project Resiliency, funded by U.S. Department of Energy through North Carolina Department of Environmental Quality
  - o Analyzed the impact of hurricane Florence on power outages and economic loss in North Carolina
  - o Processed and analyzed spatiotemporal ADP payroll big data to evaluate economic loss during hurricane Florence
  - Collected, preprocessed and analyzed spatiotemporal Night Light remote sensing data using Python for identifying daily power outages during hurricane Florence
- Graduate Research Assistant, University of North Carolina, Charlotte
  Port choice project, funded by the World Bank, Port Choice in the Cone of Southern Africa
  - o Collected and analyzed data on global vessel trajectories and ports facilities
- Teaching Assistant, University of North Carolina, Charlotte

Spring 2018 - spring 2019

Summer 2018

## E-mail: fhatami@uncc.edu

#### **SKILLS**

Machine learning, Data mining, Data visualization, SQL, Data wrangling, Feature selection, Risk analysis, Optimization, Linear programming, Statistics, Spatial statistics

### **COMPUTER SKILLS**

Python, R, MATLAB, SAS, ArcGIS, SPSS, Excel (Analytic Solver Platform for Education (ASPE)), Pajek, Gephi

### **PUBLICATIONS AND CONFRENES**

- Nikparvar, B., Rahman, M., Hatami, F., & Thill, J. C. (2021). Spatio-temporal prediction of the COVID-19 pandemic in US counties: modeling with a deep LSTM neural network. *Scientific Reports*, 11(1), 1-12.
- Racine, E. F., Schorno, R., Gholizadeh, S., Bably, M. B., Hatami, F., Stephens, C., Zadrozny, W., Schulkind, L., & Paul, R. (2022). A College Fast-Food Environment and Student Food and Beverage Choices: Developing an Integrated Database to Examine Food and Beverage Purchasing Choices among College Students. *Nutrients*, 14(4), 900. https://doi.org/10.3390/nu14040900
- Paul, R., Chen, S., Thill, J. C., Hatami, F., Patel, R., Verma, H., Lalgondar, P. (2021) <u>Bayesian spatiotemporal</u> ensemble nowcasting of covid-19 deaths across the contiguous <u>United States</u>. *American Public Health Association* 2021 Annual Meeting and Expo.
- Hatami, F., Thill, J. C. (2020). Quantifying the impact of built environment types on duration of commute. *American Association of Geographers Annual Meetings*.
- Sanaeefar, H., Hatami, F. (2019). Classifying Metro and BRT Stations in Order to Determine the Prospects and Appropriate TOD Projects, With the Case Study of the Central Part of Tehran City. *International Journal of Advanced Science and Technology* 28 (8), 107-124.

# **CERTIFICATES**

- Pursuing Data Science and Business Analytics Certificate, University of North Carolina at Charlotte
  GPA: 4
  Fall 2019 present
- Pursuing GIS certificate, University of North Carolina at Charlotte GPA: 4

Fall 2018 - present

Phone: (704) 281-0284

## RESEARCH INTERESTS

- Interested in research in forecast models using machine learning and deep learning techniques
- Interested in research in Geo-visualization and GIS

## AWARDS, DISTINCTIONS AND FELLOWSHIPS

Graduate Assistant Support Plan Award

Fall 2018 - present

o University of North Carolina at Charlotte

### **VOLUNTEERING**

ISO student organization at UNCC, Program director

Fall 2018 - spring 2019

## **EDUCATION**

### **University of North Caroline at Charlotte**

Ph.D. in Geography, Charlotte, North Carolina. GPA: 4

Fall 2018 - present

**International University of Imam Reza** 

Master of Urban Design, Mashhad, Iran. GPA: 3.48

2012 - 2014

**Bojnourd University** 

Bachelor of Engineering, Urban Planning Engineering, Bojnourd, Iran. GPA: 3.38

2008 - 2012