

# ERFAN HOSSEINI SERESHGI

9176075440 | New Orleans, LA | shosseinisereshgi@tulane.edu

## SUMMARY

I am a python software developer with notable research experience in computational geometry and algorithm development, in particular, geospatial algorithms and graph/shape comparison methods.

## PROFESSIONAL EXPERIENCE

**Research Assistant, LA-CEAL, Tulane School of Public Health** 2021  
*New Orleans, LA*

- I implemented a program to study and observe public response to covid19 and its vaccines on social media using python (NLP)

**Research Assistant, Geographic Momentary Assessment, Public Health** 2021  
*New Orleans, LA*

- I developed a python program to manage relatively massive datasets of landmarks and users (patients) and compute users' daily, weekly and monthly exposure to alcohol, drugs, crime, recreational centers, etc

**IT Specialist, Tulane Pre-college Program** Summer 2020  
*New Orleans, LA*

- I provided troubleshooting and IT support to the teachers and students during their online courses.

**Head of IT Guru, AIESEC in Iran** 2017 – 2018  
*Tehran, Iran*

- I was the manager of the website and worked on an online customer support bot

**Front-end Developer Internship, Moduland** Summer 2017  
*Tehran, Iran*

- I designed and developed a responsive website for one of their products

**Project Manager, Dynamic Portal** 2015 – 2017  
*Tehran, Iran*

- DP was my own project, a new student info system and LMS at Amirkabir University of Technology

## EDUCATION

**Tulane University – New Orleans – Ph.D.** 2018 – 2023

- Computer science, computational geometry, embedded graphs

**Amirkabir University of Technology – Tehran – Bachelor of Science** 2014 – 2018

- Computer science, computational geometry

## RESEARCH AND PUBLICATIONS

- Merging Roadmaps using Graph Distance Measures** 2022  
Erfan Hosseini Sereshgi and Carola Wenk  
- *Fall Workshop on Computational Geometry (FWCG)*
- Graph Sampling for Map Comparison** (received best paper award) 2021  
Jordi Aguilar, Kevin Buchin, Maike Buchin, Erfan Hosseini Sereshgi, Rodrigo I. Silveira and Carola Wenk  
- *ACM Sigspatial, Spatial Gems*
- Measuring Length-Preserving Fréchet Correspondence for Graphs in  $\mathbb{R}^2$**  2021  
Kevin Buchin, Brittany Terese Fasy, Erfan Hosseini Sereshgi and Carola Wenk  
- *Fall Workshop on Computational Geometry (FWCG)*
- Improved Map Construction using Subtrajectory Clustering** 2020  
Kevin Buchin, Maike Buchin, Joachim Gudmundsson, Jorren Hendriks, Erfan Hosseini Sereshgi, Vera Sacristán, Rodrigo I. Silveira, Jorrick Sleijster, Frank Staals and Carola Wenk  
- *ACM Sigspatial, LocalRec*
- Computing Relevant Subtrajectory Bundles Faster** 2020  
Erfan Hosseini Sereshgi and Carola Wenk  
- *SoCG, Young Researchers Forum*
- Clustering Gene Expression with Polygonal Chain Alignment** 2018  
*Capstone project*

## PRESENTATIONS

- Merging Roadmaps using Graph Distance Measures** 2022  
*Fall Workshop on Computational Geometry (FWCG)*
- Graph Sampling for Map Comparison** 2021  
*ACM Sigspatial, Spatial Gems*
- Measuring Length-Preserving Fréchet Correspondence for Graphs in  $\mathbb{R}^2$**  2021  
*Fall Workshop on Computational Geometry (FWCG)*
- The Study of Gentrification on Social Urban Simulation - How Income and Interest Can Shape Neighborhoods** 2020  
*Tulane University*
- Improved Map Construction using Subtrajectory Clustering** 2020  
*ACM Sigspatial, Location-based Recommendations, Geosocial Networks and Geoadvertising*
- Computing Relevant Subtrajectory Bundles Faster** 2020  
*SoCG, Young Researchers Forum*
- Clustering Gene Expression with Polygonal Chain Alignment** 2018  
*Amirkabir University of Technology*
- A brief Intro to Computational Geometry** 2017  
*Amirkabir University of Technology, Graduate studies seminar*

## TEACHING EXPERIENCE

<b>Arduino course teacher at Tulane Pre-college Program</b> <i>Instructor</i>	Summer 2022
<b>Introduction to Discrete Math Lab</b> <i>Teaching assistant</i>	Fall 2020
<b>Introduction to Algorithms Lab</b> <i>Teaching assistant</i>	Fall 2019
<b>Python game design teacher at Tulane Pre-college Program</b> <i>Instructor</i>	Summer 2019 and 2022
<b>Intro to Computer Science I Lab (Python)</b> <i>Teaching assistant</i>	Fall 2018, Spring 2019, Spring 2020
<b>Operating systems Lab/Workshop</b> <i>Teaching assistant</i>	Spring 2017
<b>C++ Programming teacher at Helli 4 high school</b> <i>Instructor</i>	2014 – 2015

## LEADERSHIP & VOLUNTEER EXPERIENCE

- Senator at Tulane Graduate and Professional Student Association (2020-2022)
- IT team leader at AIESEC in University of Tehran (2017-2018)
- Marketing designer at AIESEC in Amirkabir University of Technology (Spring 2017)
- AIESEC global volunteer for raising public awareness about clean energy and recycling in Guangzhou, China. (Summer 2016)
- Member of scientific association of math and computer science at Amirkabir University of Technology (2015-2016)

## CERTIFICATES

- Java programming from Amirkabir University of Technology
- Android development from Amirkabir University of Technology
- Web development and web design from Amirkabir University of Technology
- CITI Group1. Biomedical Researchers
- CITI Group4. IRB, Biomedical Research

## SKILLS & ABILITIES

- Skilled in Python, Java and C++
- Familiar with HTML, CSS and Javascript
- Have worked with R and R studio
- Have experience working with Adobe Photoshop and illustrator
- Familiar with Git and Visual Paradigm
- Have some basic knowledge about Android Studio

## HONORS & AWARDS

- Best paper award at ACM Sigspatial: Spatial Gems (2021)
- Ranked 6<sup>th</sup> in the Iranian national CS graduate school entrance exam (2018)
- Ranked among top 5 computer science students at Amirkabir University of Technology (class of 2018)
- Semi-finalist in 2014 BAYAN coding contest in Iran

- Ranked among 3% in the Iranian national university/college entrance exam (2014)  
(More than 60,000 students)
- Was selected by and studied at the national organization for development of exceptional talents (NODET) in Iran