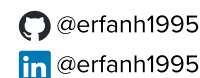


Erfan Hosseini Sereshgi

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ALGORITHM ENGINEER

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

KEY COMPETENCIES

Algorithm Design
Programming
GIS

Data & Analytics
Software Engineering
Statistics

Map Construction
Computational Geometry
Optimization

PROFESSIONAL EXPERIENCE

Tulane University

2018 - present

Graduate Researcher

2021 - present

- Published 5+ papers in top venues such as SoCG, WADS and ACM SIGSPATIAL
- Received Summer Graduate Award from Connolly Alexander Institute for Data Science (Data Hub) in 2023
- Received Best paper award from ACM SIGSPATIAL International Workshop on Spatial Gems in 2021
- Contributed 3000+ lines of infrastructural code to 4 organizational projects and co-mentored 5 undergraduate researchers

Data Analyst - LA-CEAL NIH Project

2021

- Was part of the group that received \$1 million NIH grant to engage with communities hardest hit by COVID-19 among 12 total entities that received such a grant.
- Collected and labeled social media data of more than 25,000 users using the state-of-the-art NLP and machine learning practices.
- Established and documented a framework for collecting and labeling the social media activities for future research.

Research Software Engineer - School of Public Health and Tropical Medicine

2021

- Implemented and maintained a python program to manage and classify collected GPS data from 100+ patients based on census data, crime reports, private datasets and public maps.

IT Specialist - Pre-college Program

Summer 2020

- Ensured high availability and uptime for the program's online platform, with a target of 99.9% uptime, with less than 10 minutes to acknowledge and less than 30 minutes to resolve issues.
- Helped generate revenue by enabling online courses and programs in the beginning of the 2020 pandemic, which estimated to be \$100k.

AIESEC in Iran

2017 – 2018

Jr. Product Manager

- Led a team of 3 developers in the creation of a customer support chatbot that offered 24/7 assistance and resolved up to 75% of submitted issues within 24 hours.

Moduland

Summer 2017

Front-end Developer Intern

- Designed and developed a responsive and modern website under Google's Material Design guidelines which increased the company's exposure to the clients roughly 60%.

EDUCATION

Ph.D. in Computer Science
Tulane University - New Orleans, LA

2018 - Expected May 2024

B.Sc. in Computer Science
Amirkabir University of Technology (Tehran Polytechnic) - Tehran, Iran

2014 - 2018

CERTIFICATIONS

Java Programming

Amirkabir University of Technology (Tehran Polytechnic)

Android Development

Amirkabir University of Technology (Tehran Polytechnic)

Web Development and Web Design

Amirkabir University of Technology (Tehran Polytechnic)

Group1. Biomedical Researchers

CITIprogram.org

Group4. IRB, Biomedical Research

CITIprogram.org

TECHNICAL SKILLS & LANGUAGES

Programming Languages:

Python, C++, Java, JavaScript, SQL, R

Web Tools:

HTML, CSS

Frameworks & Other Tools:

GDAL, Pytorch, Pandas, Numpy, Pygame, Git

Applications:

QGIS, Visual Paradigm, Android studio, Adobe Photoshop, Adobe Illustrator

Languages:

English (fluent), Persian (native), Arabic (intermediate)

PUBLICATIONS

Drawing Reeb Graphs – International Symposium on Graph Drawing and Network Visualization (GD) **2023**

Erin Chambers, Brittany Terese Fasy, Erfan Hosseini Sereshgi, Maarten Löffler and Sarah Percival

On Length-sensitive Fréchet Similarity – Algorithms and Data Structures Symposium (WADS) **2023**

Kevin Buchin, Brittany Terese Fasy, Erfan Hosseini Sereshgi and Carola Wenk

Merging Roadmaps using Graph Distance Measures – Fall Workshop on Computational Geometry (FWCG) **2022**

Erfan Hosseini Sereshgi and Carola Wenk

Graph Sampling for Map Comparison (received best paper award) – ACM Sigspatial, Spatial Gems **2021**

Jordi Aguilar, Kevin Buchin, Maike Buchin, Erfan Hosseini Sereshgi, Rodrigo I. Silveira and Carola Wenk

Measuring Length-Preserving Fréchet Correspondence for Graphs in R2 – Fall Workshop on Computational Geometry (FWCG) **2021**

Kevin Buchin, Brittany Terese Fasy, Erfan Hosseini Sereshgi and Carola Wenk

Improved Map Construction using Subtrajectory Clustering – ACM Sigspatial, LocalRec **2020**

Kevin Buchin, Maike Buchin, Joachim Gudmundsson, Jorren Hendriks, Erfan Hosseini Sereshgi, Vera Sacristán, Rodrigo I. Silveira, Jorrick Sleijster, Frank Staals and Carola Wenk

Computing Relevant Subtrajectory Bundles Faster – Symposium on Computational Geometry (SoCG), Young Researchers Forum **2020**

Erfan Hosseini Sereshgi and Carola Wenk