

Hamid Aghel

 Home : ROMA, Italy

Email: [REDACTED]

 Phone: [REDACTED]

26/06/2024

ABOUT ME

This is Hamid Aghel. I hold a bachelor's degree in civil engineering then I achieved a master's degree in transportation systems engineering at Sapienza University of Rome, where I have maintained a GPA of 28.81/30 and earned a final grade of 110/110 with honors (e lode).

My research focuses on the "Investigation of an Explicit Formulation of the Optimal Cycle Length at Isolated Signalized Junctions Based on the Highway Capacity Manual (HCM) Delay Model." Throughout my research thesis, I employed regression analysis, machine learning, and deep learning techniques as well as optimization algorithms to derive an optimal cycle length formula for signalized junctions. I introduced a new formula which is more comprehensive and precise regarding Webster's optimal cycle length.

In addition to traffic engineering, my interests span across various fields including data processing and analysis, Intelligent Transportation Systems (ITS), railway systems, urban transport systems, and their economics. Furthermore, I possess advanced computer skills in network management, hardware technical support, and IT operational roles. Driven by a passion for advancing intelligent transportation systems, I seek to harness the power of IT and AI to optimize traffic flow, enhance safety, and promote sustainable mobility.

WORK EXPERIENCE

[27/09/2014 – 27/09/2015]

Manager of Computer Services office

Owner

City: Mashhad | **Country:** Iran

I managed and developed the internet network services in my city by holding this office.

[21/06/2016 – 21/09/2016]

Internship

Sivan Shargh

City: Mashhad | **Country:** Iran

During my internship program, I learned all procedures and processes of building and developing construction, the procedure of authorities' permission, creating and modifying in-built plans, quantity surveying and estimating as well as all empirical methods that I had learned civil engineering.

[20/09/2016 – 21/05/2017]

Teacher Assistant

Civil engineering faculty of Azad University of Mashhad

City: Mashhad | **Country:** Iran

I have tutoring and teaching experience in civil engineering courses such as Road Design and Construction, Reinforced Concrete Structures, Fluid Mechanics.

[22/11/2017 – 20/07/2020]

Technical Technician

Maadiran Company

City: Mashhad | **Country:** Iran

I learned repairing electronic devices and customer services of Maadiran digital products. (Full time in 2017-2018 and part time in 2018-2020)

[20/06/2018 – 21/06/2020]

Secondary School Teacher

Education organization of Iran

City: Sarakhs | **Country:** Iran

I was teaching Mathematics, Physics, English for 2 years in high schools of education organization of Sarakhs.

[12/05/2021 – Current] **Student Representative**

Transportation systems engineering department of Sapienza University

City: Rome | **Country:** Italy

I resolve students' issues in the board of the department as a member of CAD.

[29/07/2022 – 09/2022] **Internship**

Hochschule Karlsruhe of applied sciences in Germany (Prof. Jan Riel)

City: Karlsruhe | **Country:** Germany

I developed my knowledge in MATSim and java programming.

[01/01/2020 – Current] **Consulting students**

Self-employment

City: Rome | **Country:** Italy

- Consulting students applying for Italy
- Applying for the universities
- Applying for the scholarships
- Applying for the Erasmus program
- Applying for all kinds of office works in Italy

[16/01/2023 – 16/03/2023] **Student Tutoration**

Sapienza University of Rome

City: Roma | **Country:** Italy

Tutoring students at the information desk office at the civil engineering department.

EDUCATION AND TRAINING

[23/09/2009 – 20/06/2013] **Diploma**

Imam Reza high school - Education organization of Iran <https://razavi.medu.ir/>

Address: Farhad No 24, Mashhad, Iran | **Field(s) of study:** mathematics and physics | **Final grade:** 19.13/20

[23/09/2013 – 21/06/2017] **B.Sc.**

Islamic Azad University Mashhad Branch <https://mashhad.iau.ir/fa>

Address: Ostad Yusefi intersection, Mashhad, Iran | **Field(s) of study:** Civil Engineering | **Final grade:** 17.13/20

[28/09/2021 – 12/07/2022] **Erasmus Study Program**

Hochschule Karlsruhe university of applied sciences <https://www.h-ka.de/>

City: Karlsruhe | **Country:** Germany | **Field(s) of study:** Transportation Systems Engineering | **Final grade:** 1.7/5

[22/09/2020 – 17/01/2024] **M.Sc.**

Sapienza University of Rome <https://www.uniroma1.it/>

Address: Via Eudossiana, 18, 00184, Rome, Italy | **Field(s) of study:** Transportation Systems Engineering | **Final grade:** 28.81/30 - 110/110 with honors | **Thesis:** Investigation of an Explicit Formulation of the Optimal Cycle Length at Isolated Signalized Junctions Based on The Highway Capacity Manual (HCM) Delay Model

[06/09/2016]

4th International Conference on Research in Engineering, Science and Technology

Athens

I collaborated with my colleague, Helma Ghasemzade, on this research project: "Provide a Method for Planned Maintenance and to Achieve High Reliability Plane." I wrote a MATLAB code to detect the probability of failure in different parts of the plane and predict the reliability of each of its systems that plays a very important role to the extent that it can be used to predict the reliability of the entire system. Even reliability can be used as one of the maintenance planning parameters. In this article, a method based on a multi-class system is presented, which predicts the reliability of each subsystem and then the flight reliability according to the parameters of the airplane subsystems.

This international conference was held in Athens, Greece on 16/09/2016.

Link: <https://www.sid.ir/paper/865718/fa>

[10/07/2016]

4th International Conference on Science and Engineering Rome, Italy

I had collaboration with Helma Ghasemzade on this research topic: Investigating the effect of the neighborhood parameter in order to select the cluster head with the aim of increasing the lifetime of the wireless sensor network. I wrote a MATLAB code in machine learning part of this project to classify and choose the cluster head of wireless sensor network.

Link: <https://civilica.com/doc/779056/>

[06/03/2024]

15th International Traffic and Transportation Conference with Artificial Intelligence Approach in Civil Engineering

Mashhad, Iran

I presented two papers in this conference:

1- Influence of Human Factors in Bike-Sharing Systems: Hiring System, Safety, Phone Application, and Satisfaction:

In this research, I compare the two different type of bike sharing systems. Bikes can be hired from station to station (dock-based) or free-floating (dockless). Station accessibility is one of the most essential elements that users consider when selecting a mode of transportation. In this research, questionnaires and surveys are used to explore three major human factors regarding accessibility connected to the hiring system, safety concerns, and how the phone application is user-friendly. These polls were conducted in Mashhad, Iran in comparison to Rome, Italy, in May and June 2022.

2- Subjective Traffic Safety for Cyclists:

Infrastructural and Cultural Impacts in Subjective Traffic Safety for Cyclists Crossing at Signalized Intersections. Cyclists are among the most vulnerable road users. Despite traffic signal control, many bicyclists have conflicts with cars and pedestrians, particularly near junctions and intersections. The focus of this report is on the safety of cycling at intersections. Various elements, including human, vehicle, and environmental factors, all have a role in the occurrence of road accidents. The goal of this report is to look at several options and provide solutions for reducing cars or pedestrian-cyclist collisions at junctions. To resolve safety issues and reduce injuries, the first step is identifying the subjective of traffic safety in the case of study. This research focuses on two subjective aspects including infrastructural and cultural effects on traffic safety and how they make unsafe feeling to cyclists according to the well-known regulations and codes including the German code and NACTO.

Professor Gaetano Fusco (the Chair of the Transportation Systems Department of Sapienza University of Rome) and Professor Natalia Isaenko accepted my invitation to be key-note speakers in this international conference of traffic engineering and ITS holding Azad University of Mashhad (my former university of the bachelor program) in Mashhad, Iran.

Link: <https://conference.nezammohandesi.ir/en/>

LANGUAGE SKILLS

Mother tongue(s): Persian

Other language(s):

English

LISTENING C1 READING C1 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

Italian

LISTENING A1 READING A1 WRITING A1

SPOKEN PRODUCTION A1 SPOKEN INTERACTION A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

My Digital Skills

General computer skills

ICDL Advanced Presentation | Microsoft Office

Advanced computer skills

A+ | Network+ | MCSE 2015

Programming languages

MATLAB | Python | Machine Learning | Fortran | HTML 5: HTML/CSS/JQuery | Delp hi | Android programming

Civil Engineering software

Civil 3D | MATSim | AIMSUN(basic) | Autodesk AutoCAD | ETABS | SAFE