



# ISSA HANOU, MSC

PhD candidate Algorithmics

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## ABOUT ME


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*As a PhD candidate, I am very excited to learn more, contribute to the research community and further develop myself. I have always enjoyed problem-solving, which is what drove me towards Algorithmics. With a passion for sustainability, I want to put my drive and perseverance towards a more sustainable world.*

## WORK EXPERIENCE

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### PhD candidate | [Delft University of Technology](#)

 Sep 2022 – Aug 2026

 Delft, The Netherlands

- My research is part of the ICAI RAIL Lab, which is a joint project between Delft University, Utrecht University, ProRail and NS on developing AI for better train planning
- My research specifically looks at learning from previous situations to produce recognizable plans for human operators


### Graduate Intern | [NS R&D Logistics](#)

 Nov 2021 – Jul 2022

 Utrecht, The Netherlands

- Studying the feasibility of the Train Unit Shunting Problem with insights from the Pebble Motion problem
- Complexity study on different variants of the problem


### Coach Online Introduction Computer Science and Engineering | [Delft University of Technology](#)

 Sep 2019 – May 2022

 Delft, The Netherlands

- Answered questions of prospective students and managed the online introductory course
- Helping students that do not have any preliminary knowledge is a challenging and rewarding task


### Student Assistant | [Delft University of Technology](#)

 Sep 2017 – Jun 2022

 Delft, The Netherlands

- Assisted on several bachelor courses, mostly within the Algorithmics and Software departments
- Helping students in their first programming (Java or Python) course drove me to find new ways of explaining
- Assisting in the third-year bachelor courses (NP-hard problems and Complexity theory) gave me more insight in the topics


### Undergraduate Intern & Junior Developer | [Raccoon Serious Games](#)

 Nov 2019 – Apr 2020

 Delft, The Netherlands

- Developed a system for designing and managing physical escape rooms, worked in Python, TypeScript and Go
- Worked together in our team of three students to integrate the system within the company and set up two escape rooms using our system


### Junior Developer | [Tektonikos](#)

 Aug 2019 – Nov 2019

 Haarlem, The Netherlands

- I worked on a temporary contract in a gap period of my studies to gather experience in the work environment
- Research and Development for best development strategies for clients' problems and bug fixes of client's websites

### Tutor | [Self-employed](#)

 Sep 2015 – Jun 2016

 Haarlem, The Netherlands

- Throughout the year I helped ten high school students of different education levels and ages with a variety of courses
- General homework assistance for a student in VMBO-B, challenging me to explain the basic concepts of mathematics
- Helped several students in their exam years with their Mathematics (VWO and HAVO) and Chemistry (HAVO)

## EDUCATION

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### Practicum Musicae - Classical Accordion | [Royal Conservatory](#)

📅 Sep 2020 – Jun 2023      📍 The Hague, The Netherlands

- Three-year part-time minor education that allows me to combine my studies in Delft with a musical education
- With efficient time management I have been able to keep up my studies in Delft besides my Conservatory studies
- My musical development has helped me build discipline and motivate myself towards my goals

### MSc Computer Science | [Delft University of Technology](#)

📅 Feb 2020 – Jul 2022      📍 Delft, The Netherlands

- Software Technology track, focus on Algorithmics, including courses Advanced Algorithms, Algorithms for Intelligent Decision-Making, Evolutionary Algorithms, Distributed Algorithms, Advanced Discrete Optimization
- Electives: Planning and Operations for Public Transportation Systems; Transport, Routing & Scheduling
- Thesis on formalizing a relaxation of the Train Unit Shunting Problem as an extension of Pebble Motion

### BSc Computer Science and Engineering | [Delft University of Technology](#)

📅 Sep 2016 – Jan 2020      📍 Delft, The Netherlands

- Courses included Reasoning & Logic, Algorithm Design, Complexity Theory. Minor in Safety, Security and Justice
- For my bachelor's thesis, we designed an escape room IoT for controlling the room

### Bilingual VWO High School | [Het Schoter](#)

📅 Sep 2010 – Jul 2016      📍 Haarlem, The Netherlands

## EXTRACURRICULARS

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### Board Member | [Haarlem Accordion Orchestra](#)

📅 Jan 2021 – current      📍 Haarlem, The Netherlands

- Taking initiative to organize national and international concerts
- Coordinating rehearsals, manage association and maintain [website](#)

### Local Organization | [BNAIC/BeNeLearn Conference](#)

📅 Nov, 2023      📍 Delft, The Netherlands

- As part of the local organization committee, I helped organizing the 2023 edition of the Benelux conference on AI.
- I was mainly involved in the hotel coordination, looking for dinner locations, managing volunteers, and on-site help

### Committee Member | [Delftsche Studentenbond](#) 📍 Delft, The Netherlands

📅 Feb 2020 – Aug 2020 **Chair Introduction Week Committee**

Lead a committee of six members to keep the organisation on track and organized a 10-day event for new students in Delft, with a full online program

📅 Jun 2019 – Nov 2021 **Member Treasury Committee**

Checked quarterly finances for the association and assisted committees in creating budgets and settlements

## HOBBIES

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Member Haarlem Accordion Orchestra, first chair

2019-2023: Dutch Symphonic Accordion Orchestra

2021-2023: Member Blue Birds First Softball Team

2022: Third prize annual Accordion Concours for duo

2018: First prize annual Accordion Concours for solo

2018: Volunteer Haarlemse Honkbal-week

2014: Member of National Dutch Softball Team U16 (Jong Oranje)

## LANGUAGES

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Dutch: **Native**

English: **Native**

Spanish: **Beginner**

## CERTIFICATES

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2015: Driver's license, Dutch type B

2014: Cambridge Advanced English

## PROJECTS

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### High School Exchange | [Central High School](#)

📅 Feb 2016      📍 St. Paul, MN, USA

As part of my IB program, I organized my own trip to the USA and the fundraising activities to pay for my trip. During my exchange, I attended the High School for two weeks and researched the differences between American and Dutch high school.

### Built financial website

📅 Feb 2017 - Oct 2019

To manage the finances of our 'verticale' at the student association, we build a Java Play website in a team of five.

### Built Orchestra website [🔗](#)

Built and maintain the website of our orchestra.