



ISSA HANOU, MSC

PhD candidate Algorithmics

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📅 25-07-1998, Haarlem, The Netherlands

ABOUT ME

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

PhD candidate | Delft University of Technology

📅 Sep 2022 – Sep 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

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

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

Board Member | [Haarlem Accordion Orchestra](#)

📅 Jan 2021 – current

📍 Haarlem, The Netherlands

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

Committees | [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

Chair and Treasurer | [Student Group within DSB](#)

📅 Apr 2018 – Okt 2020

📍 Delft, The Netherlands

- For one-and-a-half years I was the treasurer of our 'verticale', a group of thirty people within our student association
- As chair I made sure that meetings were organized, booked weekends and holidays and set up our Lustrum activities

Committee Member | [VSSD](#)

📅 Sep 2017 – Jul 2019

📍 Delft, The Netherlands

- Wrote quarterly newsletters as the Orakel committee, and was secretary at the General Meetings (ALV) for two years
- Organized Lustrum activities: free sandwiches for students at the Library, craft beer tasting for active member, luxury dinner for old board members

HOBBIES

Member Dutch Symphonic Accordion Orchestra

Member Haarlem Accordion Orchestra

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

Dutch: [Native](#)

English: [Native](#)

CERTIFICATES

2015: Driver's license, Dutch type B

2014: Cambridge Advanced English

PROJECTS

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.

Build 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.

Build Orchestra website

Built and maintain the website of our orchestra.