

CV of Ir. Rafael Malach Dulfer, MSc

INTERESTS

- Programming Language Design
- Automation
- Software Architecture
- Modernizing
- Open-Source

SKILLS

- | | |
|--------------------------|----------------------|
| • Programming Languages: | • Natural Languages: |
| – Python | – Dutch |
| – PHP | – English |
| – Rust | |
| – Java | • Linux |
| – Haskell | • Server Hosting |
| – JavaScript | • Git |
| – SQL | • Scrum |

WORK EXPERIENCE

Web Developer - Netherlands Society of Cinematography Jan 2023 - Now

- Took over development from previous developer and streamlined backend to simplify the addition of new features and added new features as required.
- Also increased page load speed by up to 3x on some pages and fixed security issues.
- cinematography.nl

Software Development - BRBA Feb 2021 - Jul 2021

From February to July 2021 I was part of the [BRBA](#) team working on vaccination registration software for the Dutch Ministry of Health Welfare and Sport (MinVWS) on tasks ranging from validation+encryption, integration testing and the streamlining of build processes.

Web Developer - Anubis Jan 2021 - Apr 2022

- Developed an online examination system for the University of Twente in use by the courses ‘Network Systems’ and ‘Web Science’.
- Self-designed Markdown dialect + parser to define the structure of exams
- Over 100 students load and use the system at the same time, with a low tolerance for failure.

Software Development - Serious Game Automatisering Jun 2019 - Aug 2019

Was commissioned by De Winter Information Solutions to create a dedicated interface to streamline and partially automate the “hosting” of a serious game for the Association of Dutch Municipalities (VNG).

EXTRACURRICULARS

- Volunteer work at various cultural spaces and events.
- Managing the band rehearsal rooms of the University of Twente.
- Organizing multiple jam and band nights.

PROJECTS

Mr Kite's Maginificent Kut-Up Machine

[Stream](#)

An infinite audio stream that takes a large database of music, shuffles it, manipulates it, cuts it up and glues it back together to play in short fragments. Written in Python (+ QT for the local [GUI](#) version).

Nethacklang

Parser + Compiler for an esolang inspired by the game Nethack, in which a developer must design a level as well as a player agent that interacts with the environment in order to do I/O. Written in Haskell.

WAGon

[Documentation](#)

My Master's Thesis Project was a DSL to define Weighted Attribute Grammars, an ecosystem to use this DSL and a GLL-based parser generator to show how to use it. Written in Rust.

Final grade 9.0.

The Propaganda Machine

[Paper](#)

My Bachelor's Thesis Project was to develop a program that automatically writes propaganda pieces based on a game of Risk. Undertook research on the effectiveness of simple automatically generated propagandaa. Written in Python + Java.

Final grade 8.0.

EDUCATION

2021 - 2024	MSc, Software Technology	University of Twente
2017 - 2021	BSc, Technical Computer Science	University of Twente
2019 - 2020	Minor New Media Language	Kaunas University of Technology
2018 - 2019	BSc of Honours, Philosophy	University of Twente
2014 - 2017	IB English A Language & Literature	Het Berlage Lyceum
2017	VWO E&M	Het Berlage Lyceum
2015	Summer Course Computer Science	Oxford University
2014	Junior TTO Certificate	Cambridge Education Group

PUBLICATIONS

Dulfer, Rafael and Lorenzo Gatti (Aug. 2021). "The Propaganda Machine: Generating Biased Reports about Risk Games". In: *2021 IEEE Conference on Games (CoG)*. 2021 IEEE Conference on Games (CoG), pp. 01–05. DOI: [10.1109/CoG52621.2021.9618993](https://doi.org/10.1109/CoG52621.2021.9618993).

Dulfer, R.M. (June 2024). *WAGon : A Weighted Attribute Grammar Oriented Notation*. URL: <http://essay.utwente.nl/99790/>.

CONTACT DETAILS

 [Rafaeltheraven](#) |  [Rafael Dulfer](#) |  [dulfer.be](#) |  rafael@dulfer.be |  +316.169.353.05