# Ing. Jelle Meeus
# Software Developer

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The online version is available at https://jellemeeus.github.io/JelleMeeus.github The online version is available at https://jellemeeus.github.io/JelleMeeus.github

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Dutch (native), English (fluent), French (intermediate)

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B

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|---|---|---|---|---|---|---|---|---|---|---|---|
| Python | +++ | Git | +++ | Javascript | ++ | VIM | ++ | Java | ++ | CI/CD | ++ |
| C/C++ | ++ | PL/SQL | ++ | 8051 ASM | ++ | React | ++ | C# | ++ | Docker | + |

## Education

Master in de industriële wetenschappen, elektronica-ICT 2018
*Katholieke Universiteit Leuven - Campus De Nayer - Sint-Katelijne-Waver*

### Thesis - Continuous Unobtrusive User Authentication Using Gait For Wearable Devices, Utilising Machine Learning Algorithms

Text PDF Powerpoint Slides PDF

I researched a gait-based authentication method amidst growing interest in non-explicit user input. I enhanced an existing barebone implementation, featuring an Android wearable app for data recording and a Python server app for offline processing. I integrated human activity and gait recognition systems, employing traditional machine learning models and a novel, fast, and accurate feature extraction technique. The outcome is a seamless, continuous gait-based authentication system, enabling offline data capture, server-based training, and real-time evaluation on a wearable.

Machine Learning | Biometrics | AI | Python | Java | Android

### 8051 Microcontroller Instruction Set IEEE754 32bit Floating-Point Library

Implementation of an IEEE754 Floating-Point library for aduc832 system platform for 8-bit 8052 based systems. This library allows for accurate and fast calculations of the four basic operations (+, -, *, /) for two numbers in IEEE754 32-bit floating-point format without using MUL/DIV instructions

source | ASM | 8051 | aduc832 | IEEE754

## Work Experience

### Machine Learning Algorithms Student

OneSpan 4 weeks summer 2017

Developed a demo allowing recording and analysis of gait data on an Android wearable device

Machine Learning | Biometrics | AI | Python | Java | Android

### Junior Software Engineer Consultant

Sioux Embedded Systems Nov 18 - Feb 19

I wrote tools accommodating a customer's migration from a Perforce Version Control System (VCS) to Git. I implemented existing and new features using Python and Gitlab API to meet developer demands. I setup a R&D Internal website (Bootstrap) to provide an overview of projects that updates nightly. I did smaller IT related tasks,

such as setting up automated backups of firewall settings and Jenkins configurations. Also, I wrote some automated tests in an in-house testing framework

Python Git Perforce Docker

## Open Source Contributions

[Azerothcore]

Contributed to Azerothcore project, a Complete Open Source and Modular solution for MMOs, by actively submitting pull requests addressing bugs in their Core (C++) and database (SQL). Includes debugging, troubleshooting by identifying and resolving issues in the codebose. Additionally, aided in quality assurance by testing and providing feedback on PRs from other contributors.

source contributions C++ SQL mmorpg emulator game

## Hobby projects

[Drawing Cards] Demo Here

A card drawing web app created with React hosted in github pages. Create and interact with a deck of French-suited SVG rendered cards. You can draw one or multiple cards, shuffle, flip over the deck. All neatly displayed through React with a status bar, menu bar and mouse over interaction

source React Javascript

[Bomberman] Play Here

Example of a 2D Classic Bomberman game made with godot. You can play as a bomb laying bunny and walk around a maze to reach a carrot and try not to blow yourself up in the process

source C# Godot

[Twitch Compilations From Cluster Data]

Create Twitch compilations and upload to Youtube with ease. Find clips by creators, clip ids, clip urls, game ids, category name, or a cluster based on Twitch Atlas

source Python Javascript React ElectronJS Twitch API Youtube API

[Automated Local And Cloud Backups With Cronjobs]

Easy automated backups to local and remote drives with cronjobs, rsync and rclone. We can specify which files to upload with filters (*.txt) and easily upload to multiple cloud drives with variable data cap limits

source crontab GNU/Linux rsync rclone

[Home Media Server]

docker-compose.yml for a Home Media Server stack including: transmission (+ openvpn), jackett, radarr, sonarr, lidarr, calibre, calibre-web, plex, soulseekqt

source Docker

[Server Status Monitor With Alerts]

Continuous Discord bot, written in Python, utilizing the Blizzard API to monitor server status and triggering ping alerts in a designated channel upon unlock status

source Python Discord bot Blizzard API