

# RIK VAN DER KOOIJ

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## EMPLOYMENT

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**Jalt, Amsterdam**  
*Software Engineer*

*September 2016 - Present*

- Saved 100s of hours a month of manual labor by automating the performance reporting of Facebook advertisements and Facebook posts. Using **Python** and **Django** a dashboard was created to view reports online with the option to export as PowerPoint file.
- Developed survey software to measure brand remembrance of the target audience. Build a web application with **Django**, **React** and **Celery** which sends out SMS messages to panel members when a new survey is ready. Panel members get a cash reward which is send as SEPA payment.
- Optimized the internal operations process by automating interaction between external tools. **Django** application listening for webhooks from Pipedrive simulates the corresponding actions to Trello and TimeChimp using their respective APIs. Employees are also notified by mail via the **Gmail API**.
- Saw opportunity to create a **Python** script to automate the creation of interactive Facebook advertisements. The resulting script saves 20+ hours of labor per ad.

**Jalt, Amsterdam**  
*Web Developer (part-time)*

*February 2013 - August 2016*

- Developed a program to extract restaurant reviews out of Twitter messages. Using **C#** a multi-process pipeline was created to download and classify tweets using random decision forests.
- Created multiple web games with Facebook scoreboard integration using **Node.js**.

## EDUCATION

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**Vrije Universiteit Amsterdam**  
*Master in Computer Science, High Performance Distributed Computing*  
Thesis: Improved run time performance of worm detection software by implementing image operations on the GPU using **C++** with **CUDA**.

*September 2012 - August 2016*

**University of Amsterdam**  
*Bachelor in Computer Science*

*September 2009 - August 2012*

Thesis: Implemented an **FPGA** reprogramming application in **C** for Unix systems by reverse engineering the messages send over USB by the reference Windows program.

## PROJECTS

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### Compiler Construction

- Build a compiler for a C-like language using **C** with **Flex** and **Bison**.
- Implemented peephole optimizations on the resulting assembly code.

### Binary Malware Analysis

- Analyzed and patched a binary ELF file containing malware using **IDA Pro** and **GBD**.

### Graphics

- Implemented 3D shaders and ray tracing in **C** with **OpenGL**.

## TECHNICAL SKILLS

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**Programming Languages**  
**Technologies**

Python, C++, C, JavaScript, Java  
Git, Vim, Docker, PostgreSQL, Redis, Celery, HTML5