JAAP WIJNEN

www.jaa.app
github.com/JaapWijnen

Creative and versatile developer with a background in theoretical physics. Quick learner with a knack for complex technical challenges. Especially interested in performance computing on the interface of hardware and software, with applications in graphics & machine learning

WORK

FREELANCE DEVELOPER

Multiple clients | September 2014 - present

Contract work for multiple clients. Projects ranging from computer graphics and physics simulations to iOS app development, back-end development and consulting.

TECH EDITOR

Raywenderlich.com | July 2021 - Present

Technical editor for the website's Server Side Swift related content.

SOFTWARE ENGINEER

Katalysis | August 2020 - April 2021

Privacy focused content reccomendation startup where I worked on several facets of the product.

- Backend development in Swift on a microservice based architecture
- Content extraction algorithms

TECH LEAD AND DEVELOPER

Bit | June 2017 - April 2020

Bit is a research and prototyping studio on a mission to fast forward the impact of emerging tech on business and planet. Bit prototypes hardware, software and AI.
Here I worked on various short term (2-3 months) prototyping projects, among which:

- Deep learning and radar hardware for Surfnet
  Detecting people through walls using a custom built high frequency radar setup. We used deep learning to process the generated data in real time.
- Computer graphics and hardware for UPS
  Physical package tracking inside vehicles using 3d point cloud scanning, allowing the driver to instantly find any given package.
- Data analysis and ML for NS International
  Data analysis on a live dataset of international train schedules and their realizations, to find the effects of delays on further scheduled arrivals to predict effects on

LANGUAGES

Dutch
English
German
Math
Swift
C++
Objective-C
Python

TECHNOLOGY INTERESTS

Computer graphics
Low Level Software
Machine Learning
Data Science

EDUCATION

MASTER THEORETICAL PHYSICS

University of Amsterdam | 2014 - 2018

Thesis completed under supervision of prof. dr. Erik Verlinde, titled "Black hole entropy from super string theory".

BACHELOR PHYSICS AND ASTRONOMY

University of Amsterdam | 2011 - 2014

- Graduated cum honore, interdisciplinary and specializing honours programme.
- Bachelor's thesis completed at Nikhef, titled "Temperature stability in the modulation experiment".
- Additional minor Programming.

TEACHING ASSISTANT

University of Amsterdam | Sept 2013 - Oct 2015

Taught three courses to first year students in the bachelor physics & astronomy:
- Current challenges in Physics
- Oscillations, Waves & Optics
- Condensed matter

AWARDS

The Next Web T500

The Next Web | May 2018

Apple WWDC Scholarship

Apple | June 2017

Hackathon Winner

FuseHack | November 2015

SIDE PROJECTS

OPEN SOURCE CONTRIBUTOR

Vapor | Oct 2019 - present

Official contributor to the Server Side Swift Vapor Framework, amongst other contributions.

FREELANCE DESIGN

Kip & Eye | Jan 2012 - present

Poster design, animations, website design, physical installations, custom light signage, furniture and interior design.

COMPUTER GRAPHICS EXPLORATIONS

- Swift/Metal Raytracing
- Ant simulation
- Swift/Metal Renderer
- C++ OpenGL renderer
- WWDC 2017 submission

FOR FUN

- Sports and culture; I love **rowing**, **surfing** and **snowboarding**. I row throughout the year and try to get on my boards at least once or twice a year (or more). **Acting** has my interest as well, I was an active member of the Amsterdam Student Drama Association (STA!). Currently very much into **dancing** (Salsa & Bachata).
- Coding, I have a few personal projects that I work on in my free time and make **open source** contributions to different projects, mostly all in **Swift**.
- I enjoy making stuff, be it using electronics and hardware, coding software, doing graphic or physical design work, using 3D printing or a CNC router. Nothing beats the feeling of having an idea and **making** it into something physical that actually works.