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# Jan Westerdiep

Rustenburgerstraat 425ii 1072GX Amsterdam The Netherlands

I am a busy bee, a fast learner, a kid at heart, and eager to explore new ideas. I tinker with everything I see and enjoy understanding "how it works". Mathematics and computer science are my thing. I am hoping to find and learn from an internship position this Fall in the field of Software Engineering.

# **EDUCATION**

## University of Amsterdam

Fall 2014 – Fall 2017 (expected)

M.Sc. Mathematics (GPA: 8.8/10)

Amsterdam, The Netherlands

- · Selected coursework: functional analysis, numerical analysis, algorithm design, optimization;
- · ASML Technology Scholarship for excellent students in the high-tech sector.

# University of Amsterdam

Fall 2014 – Fall 2017 (expected)

M.Sc. Computational Science (GPA: 8.8/10)

Amsterdam, The Netherlands

· Main focus: machine learning, simulation, numerical mathematics.

# University of Amsterdam

Fall 2011 – Fall 2014

B.Sc. Mathematics (GPA: 8.6/10; Cum Laude)

Amsterdam, The Netherlands

- · Including Honours certificate;
- · Combined thesis on a novel algorithm for piecewise polynomial approximation in 1 and 2 dimensions. Advisor: R.P. Stevenson, graded 9.75/10.

## University of Amsterdam

Fall 2011 - Fall 2014

B.Sc. Computer Science (GPA: 8.7/10; Cum Laude)

Amsterdam, The Netherlands

· Courses on algorithm analysis, compiler construction, GPU & parallel programming.

### **EXPERIENCE**

**ASML** 

Fall 2014 - Fall 2016

Veldhoven, NL

Technology Scholar

- $\cdot$   $\in$ 10000 scholarship that is awarded annually to 25 Dutch Master's students in the high-tech sector;
- · Selection based on academic accomplishments and interpersonal skills;
- · Monthly meetings with personal coach, and management-, soft skill & personal development trainings.

# University of Amsterdam

Spring 2016

Lecturer (8 hrs/week)

Amsterdam, NL

· Creating Competitive Programming workshop for  $\pm 10$  students training for the ICPC European finals.

## Copernica Marketing Software

November 2015 – Current

Software Engineering Intern (8 hrs/week)

Amsterdam, NL

· Contributing to and writing documentation for high-performance parallel applications written in C++.

## University of Amsterdam

 $Fall\ 2011-Fall\ 2015$ 

Study Advisor - Double Bachelor

Amsterdam, NL

· Inspiring pre-university students for our Double Bachelor programme.

# **PROJECTS**

# hp-AFEM implementation (spin-off of B.Sc. thesis)

 $Fall\ 2015-Current$ 

· First-ever implementation of a novel optimal algorithm in the field of Finite Element Methods;

- · Very technically challenging from both mathematical and software architectural viewpoint;
- · Goals: working library and visualisation tool; publication in scientific journal; correctly identifying and applying design patterns. Written in C++, Python, MATLAB.

Apparatus Spring 2016

· Bag-Of-Features image classifier using Machine Learning methods. Final solution yields 99.5% accuracy on a held-out test set of images. Written in MATLAB.

## Parallel Conjugate Gradients on Sparse Stiffness Matrices

Spring 2015

· In-depth analysis and massively parallel implementation of numerical linear algebra algorithm, with a novel application in Finite Element Methods. Written in C, using OpenMP and MPI.

# Keyboard brain transplant

Spring 2015

· Mod of my Happy Hacking Pro 2 keyboard, making it fully hardware programmable by desoldering the original controller and replacing it with an alternative.

### **EXTRACURRICULARS**

## Stichting Bèta Bedrijvencontactdag Amsterdam

Fall 2014 – April 2015

Board member: Head of Marketing for Bèta Career Event 2015 (20 hrs/week)

Amsterdam, NL

- · Responsible for design & print, marketing strategies, website, student registrations, acquisition;
- · 50% increase of student participants wrt. earlier editions (from previous 350);
- · Acquisition of several companies in the technology sector, such as ASML, MediaMonks, Thales, IBM.

# Jellinek Verslavingszorg

November 2014 – Current

Volunteer: Peer Educator for Unity Amsterdam

Amsterdam, NL

· Unity is a volunteer project for and by adolescents in the dance scene. We provide harm reduction education at dance events by having conversations and taking quizzes.

Phanos Amsterdam

2007 - 2012

Top athlete in Track & Field

Amsterdam, NL

- · Performed in various national and international events, in the short sprint (100m, 200m) and 4×100m relay disciplines, conquering a ninth all-time place in the Dutch 200 metres Under-20 rankings;
- · Member of the 2012 Dutch Under-20 World Championships relay team.

#### HONOURS AND AWARDS

<b>2015</b>	29th place, Northwest-European finals of International Collegiate Programming Contest
2015	Silver medal, Newcraft Big Data Challenge
<b>2014</b>	ASML Technology Scholarship
$\boldsymbol{2012}$	Silver medal, Dutch national championships Under-20 in the 200 metres
2008	Silver medal, Mathematics Tournament (Radboud University Nijmegen)

#### SKILLS

Computer Languages C++, C, Python, MATLAB, PHP, SQL, CSS, JavaScript,

Objective-C (iOS), Java (Android)

Tools vim, git, IATEX, Photoshop, Mac OSX, GNU Linux

Natural Languages Dutch (mother tongue), English (full professional proficiency)

# INTERESTS

Live music performances, typography, athletics, competitive programming.