







# DAMIEN ENGELS

## Enthusiastic Hacker

### EDUCATION

SEPT 2013-JULY 2016	<b>Masters Degree in Computer Science</b> GPA: 5.46 / 6.0	Swiss Federal Institute of Technology (EPFL)
AUG 2012-MAY 2013	<b>Exchange Student</b> GPA: 3.77 / 4.0	Carnegie Mellon University (CMU)
SEPT 2010-JULY 2013	<b>Bachelor Degree in Computer Science</b> GPA: 5.63 / 6.0	EPFL

### WORK EXPERIENCE AND PROJECTS

SEPT-DEC 2015	 ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE	<b>Code Performance Analysis Project</b> <i>Scalometer for ScalaJS</i> WORKING WITH A PARTNER, WE ARE TASKED TO WORK ON THE SCALAMETER DSL AND INTEGRATE IT TO SCALAJJS, THE JAVASCRIPT IMPLEMENTATION OF THE SCALA COMPILER.
JUN-SEPT 2015		<b>Microsoft</b> <i>Software engineer internship – SharePoint Authentication and Authorization</i> RESPONSIBLE FOR COLLECTING AND DISPLAYING TELEMETRY ABOUT USER SCENARIOS IN THE CLOUD. DEVELOPED INTERNAL TOOLS TO FACILITATE CREATION AND DEPLOYMENTS OF MONITORS THAT TRACK THE SYSTEM'S HEALTH.
SEPT-DEC 2014	 LLVM COMPILER INFRASTRUCTURE	<b>EPFL DSLAB</b> <i>Improving C++ Virtual Calls Protection in the Code-Pointer Separation Mechanism</i> MASTER SEMESTER PROJECT. MODIFIED THE CLANG C++ COMPILER AND BUILT AN LLVM PASS THAT ALLOWS TO ENFORCE VALIDITY OF VIRTUAL TABLE POINTERS AT RUN-TIME WITH NO MEMORY ACCESS AND THUS VERY LOW OVERHEAD (1-5%)
AUG-SEPT 2014	 smp swissmedia partners Schweizer Medien-Kooperation	<b>SwissMediaPartners AG</b> <i>Software Engineering</i> RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF A WEB SERVICE. IMPLEMENTED THE REST API AND WEB ADMINISTRATIVE CONSOLE. USED AND GOT FAMILIAR WITH AN EXTENSIVE NUMBER OF WEB DEVELOPMENT TOOLS (PLAY FRAMEWORK, BOOTSTRAP, JAVASCRIPT, COFFEESCRIPT, LESS, SBT)
FEB-JUL 2014	 CISCO	<b>Cisco Systems</b> <i>Symbolic Execution Based Testing</i> DESIGNED AND IMPLEMENTED TOOLS BASED ON THE S2E PLATFORM AND INTEGRATED THEM INTO CISCO'S TOOL CHAIN AND DEVELOPMENT PROCESS. MEASURED THE BENEFIT OF WHITE-BOX FUZZING FOR CISCO'S PRODUCTS. CONTRIBUTED TO THE S2E PLUGINS.
JAN-MAY 2013	 Carnegie Mellon University	<b>Operating Systems Project</b> WORKED WITH A PARTNER TO CREATE A SMALL LINUX-LIKE KERNEL WITH VIRTUAL MEMORY AND PROCESS SCHEDULING. UNCOVERED CONCURRENCY AND MEMORY BUGS TO CREATE A ROBUST FINAL PRODUCT. MANAGED A LARGE CODE BASE (9 KLOC) USING GIT.

### TECHNICAL SKILLS & LANGUAGES

PROGRAMMING	SCALA, C, JAVA, C#, BASH, PYTHON, C++, JAVASCRIPT, LUA, PERL	FLUENT	FRENCH, ENGLISH
SKILLS	WEB DEVELOPMENT, SYSTEMS PROGRAMMING, COMPILERS, BIG DATA ANALYTICS, REACTIVE PROGRAMMING	BASIC	ITALIAN, GERMAN

## AWARDS

---

FEB. 2015 [FIRST PLACE AT START UP WEEKEND LAUSANNE](#)  
SEPT. 2013 [EXCELLENCE FELLOWSHIP](#) FOR MASTER'S STUDIES AT EPFL  
MAY 2013 [DEAN'S LIST](#) OF THE SCHOOL OF COMPUTER SCIENCE AT CARNEGIE MELLON UNIVERSITY  
JULY 2010 MATHEMATICS AND APPLIED MATHEMATICS DISTINCTION AT GYMNASÉ DE NYON

## EXTRA-CURRICULAR ACTIVITIES

---

[MUSICBOT](#) EXPLORATION OF WEB TECHNOLOGIES THROUGH EXPERIMENTATION.  
([WORK IN PROGRESS](#)) SCALAJ, WEBSOCKETS, ACTOR PROGRAMMING, PLAY FRAMEWORK, SPOTIFY'S APIS, OAUTH2, MATERIALIZECSS, REACT.

STUDENT ASSISTANT INFORMATION, COMPUTATION, COMMUNICATION — COMPILER CONSTRUCTION  
INFORMATION SCIENCE — DISCRETE STRUCTURES — INFORMATION TECHNOLOGY PROJECT

ROWING CLUB D'AVIRON NYON (3RD PLACE IN 8+ JUNIOR AT THE SWISS CHAMPIONSHIPS)  
CARNEGIE MELLON VARSITY CREW (2ND PLACE IN 4+ AT THE HEAD OF THE OHIO)

STUDENT COUNCIL MASTERS CLASS DELEGATE AND VICE-PRESIDENT OF [CLIC](#)  
(ASSOCIATION DES ÉTUDIANTS EN INFORMATIQUE ET COMMUNICATIONS)

[HC<sup>2</sup>](#) ORGANIZATION OF ONE OF SWITZERLAND'S LARGEST ALGORITHMIC CONTESTS.

## PERSONAL DATA

---

PLACE AND DATE OF BIRTH: MORGES, SWITZERLAND | 5 MAY 1992  
ADDRESS: CHEMIN DE RENENS 55, 1004 LAUSANNE, SWITZERLAND  
NATIONALITY: SWISS AND SOUTH-AFRICAN  
PHONE: +41 78 683 50 99