Alessandro **Candolini**

Software Engineer · Physicist · Data Scientist

via Monte Grappa 44, 33100, Udine, Italy

(+39) 333-43-87-420 | alessandro.candolini@gmail.com | acando86 | alessandrocandolini | alessandro.candolini

I am an Italian theoretical particle physicist with heavy mathematical background, problem-solving attitude, and passion for statistical data analysis, simulation and software development. My current interest is in data science and I am looking for a position sitting at the crossroad between modern machine learning algorithms, traditional statistics, new technology and the computational challenges of writing code for reliable and efficient processing of massive datasets. I firmly believe in the future of this exiting and highly cross-disciplinary field and at the same time I think it is close to my academic background and fits my skills. My ideal job would involve working in a stimulating, innovative, team where I can give valuable insights that help the company to grow and at the same time where I have the opportunity to improve myself and my knowledge.

Skills

Programming Android, C/C++, Scala, Python, Java, SQL, LaTeX 2$_\epsilon$, HTML5, JSF, bash

Tools vim, sublime, Eclipse, Android Studio, Scala IDE; Atlassian JIRA, Confluence, and TestLodge; Asana; CVS, command-line git, GitHub, BitBucket; virtualbox, vagrant

Languages Italian (native proficiency), English (level B2 advanced, 2006 University of Cambridge First Certificate)

Employment

Spotlime

Milan, Italy

Android software engineer — *September 2014 – present*

I am responsible of the development of the Android native application for Spotlime, a startup aimed at promoting the discovery of the best events in Milan and Rome. My duties and responsibilities:

- development (from scratch) and maintenance of the Android native application for Spotlime;
- provide level of effort to integrate new functionalities and implement them;
- work alongside marketing team to deliver a product closer to real user needs, promoting solutions that helps improving user experience in response to user feedback and analytics data;
- work alongside server-side and iOS developers to coordinate the upcoming releases following CTO directives;
- help to develop Spotlime official desktop website using mainly JSF and primefaces technology.

Technologies: Android SDK, Google Play Services, Android Studio and Eclipse IDEs, Facebook SDK, ORMLite and SQLite, gson, eventbus. Experience in: client-server synchronization, multithreading, social channels, analytics, maps and geolocation. Company website: `http://www.spotlimeapp.com/` The Android app is freely downloadable from Google play store: `https://play.google.com/store/apps/details?id=com.gooutsrl&hl=en`

Usablenet - leading global mobile and multi-channel technology company.

Udine, Italy

Lead Quality Assurance Analyst — *October 2012 – August 2014*

After few months working as a quality assurance analyst, I was promoted quality assurance team leader at Usablenet, a leading technology platform company delivering enterprise-level mobile and multichannel commerce solutions. My responsibilities:

- working in synergy with web developers, project manager, solution engineer team and customers to consistently deliver high-quality products that fulfills customer expectations and end user needs
- monitor and track project status during all steps, to meet deadlines and ensure all scope changes, variances and contingences that may arise during the projects lifecycle were visible to all people involved
- Ability to prioritize and track multiple projects in parallel, manage allocation of resources within the team, supervise and support my team activities
- be a go-to person in the team
- Proven ability to work under pressure responsibly and fulfilling high expectations.
- promote new strategies to speed up effective communication among all teams involved in the project, suggesting improvements to current workflows and defining new internal procedures
- debugging and monitoring of customized web analytics solutions and technical requirements (for example requirements involving akamai technologies)
- 247 QA support
- developing small scripts (mainly using Python+JQL) which help to retrieve project information from Atlassian Jira and provide automatic statistical reports about project status

Personally responsible as QA analyst of: Camelot Group (UK National Lottery, including the launch of the mobile website for the new lotto raffle on October 2013), Dell Inc. (22 countries including US, UK, China etc), FedEx, MaryKay, Selfridges, Surfstitch and many others. Company website: `http://usablenet.com/`

University of Udine *Udine*

Teacher (on call) *2006 – 2012*

I have been asked to teach the *Esercitazioni guidate di Fisica per il Corso di preparazione al Test di ammissione alla Facoltà di Medicina e Chirurgia* at the University of Udine (support training lectures organized for students who have to perform the examination test to enter the first year at the faculty of Medicine).

R.U.E. Risorse Umane Europa (no-profit association) *Udine*

IT technical expert (on call) *September 2011 – August 2012*

Handling the IT issues in a small office (5 employees): pc, network and website maintenance

Consorzio per la Fisica *Trieste*

LaTeX 2_ϵ typesetter *January 2010 – December 2010*

I typeset prof. E. Gozzi lectures notes for his course of Quantum Mechanics. The notes are currently available at

`http://www-dft.ts.infn.it/~gozzi/QM2.pdf`

I.N.F.N. (Istituto Nazionale di Fisica Nucleare) *Trieste*

C++ developer as volounteer *February 2008 – May 2008*

Development of a object-oriented C++ library for uniform and non-uniform pseudo-random number generations, including some state-of-art algorithms

Education

University of Trieste *Trieste (Italy)*

Master student in Theoretical Physics *September 2009 – now*

- Still under completion (due to work). I have successfully done exams including: advanced statistical mechanics, quantum field theory, advanced mathematical methods and computational physics, including C++ implementation and comparison of symplectic algorithms for numerical integration of ordinary differential initial valued problems in classical molecular dynamics and monte carlo simulation of statistical mechanics system like the spin Ising model

University of Trieste *Trieste (Italy)*

Bachelor's degree in Physics 110/110 *May 2009*

- Thesis title: *Simulazione numerica dello stress termomeccanico in un ellissometro*.
- Advisor: Prof. E. Milotti.
- Description: numerical investigation of the influence of laser beam-pointing fluctuations on the thermomechanical stress-induced birefringence in the optical ellipsometer of PVLAS experiment. The thesis required 1 year of advanced C++ programming including the development of an object-oriented library for finite-element solution of partial differential equations in rectangular domains and numerical integration of Ito stochastic differential equations. Thesis available (in Italian) at `http://www.infn.it/thesis/PDF/getfile.php?filename=3304-Candolini-triennale.pdf`

Liceo Scientifico Statale G. Marinelli *Udine (Italy)*

Scientific high school diploma 100/100 *July 2005*

- High school's thesis in Physics: *Approccio spazio-temporale globale alla teoria quantistica e formulazione di Feynman della QED* (translation: overall space-time approach to quantum theory and Feynman's formulation of QED). Advisor: Prof. F. de Stefano

Continuing Education

Coursera

2014 **Machine Learning**, Statement of Accomplishment of Machine Learning course by Professor Andrew Ng from Standford University. Website of the course: `https://www.coursera.org/learn/machine-learning/home/info` *Coursera*

Workshop and schools in Physics

2013 **School on Supersymmetry and Unification of Fundamental Interactions (Pre-SUSY 2013)**, Attended the school as partecipant at International Center for Theoretical Physics (ICTP). Website of the school: `http://presusy2013.ictp.it/` *Trieste (Italy)*

2013 **Workshop on Ultracold Atoms & Gauge Theories**, Attended the workshop as partecipant at International Center for Theoretical Physics (ICTP). Webpage of the workshop: `http://cdsagenda5.ictp.trieste.it/full_display.php?ida=a12184` *Trieste (Italy)*

2012 **Workshop on Majorana Fermions, Non-Abelian Statistics and Topological Quantum Information Processing**, Attended the workshop as partecipant at International Center for Theoretical Physics (ICTP). Webpage of the workshop: `http://cdsagenda5.ictp.trieste.it/full_display.php?email=0&ida=a11183` *Trieste (Italy)*

2010 **Ph.D. Course of Introduction to Bayesian methods**, I attended *as volountear* the Ph.D. course of Introduction to Bayesian methods (Prof. E. Milotti). Lectures address Ph.D. students in Physics at university of Trieste. Topics covered include: Bayesian inference, Maximum-Entropy and its applications to image restoration, EM algorithm, Markov-Chain Monte Carlo, introduction to naive Bayesian learning and Bayesian classifiers (AUTOCLASS). Webpage of the course: `http://wwwusers.ts.infn.it/~milotti/Didattica/Bayes/Bayes.html` *Trieste (Italy)*

Scholarships

2009 **University College for Sciences "Luciano Fonda"**, I won the scholarship in Physics for academic achievements. The evaluation of the candidates was based on an oral examination and the documents supporting the application (curriculum vitæ et studiourum, certificate indicating the exams sat and the marks obtained and two letters of presentation). *Trieste (Italy)*

2005–2008 **University College for Sciences "Luciano Fonda"**, I won the scholarship in Physics for academic achievements and maintaned it for the three years of undergraduate studies. The evaluation of the candidates was based on writing and oral examination. In order to maintain the right to the scholarship students had to sit all the exams set for each year within the following 31st October and to obtain an *average mark of at least 27/30* for the exams sat in the academic year and *no less than 24/30* in any one exam. *Trieste (Italy)*

Pubblications

2003 **Radio Observations of the 2002 December Ursids from North-Eastern Italy**, W. Boschin, D. Ganzini, *A. Candolini*, G. Candolini, , WGN, 31:1 29–30

Interests

Scientific interests

- Quantum and Statistical Field Theory
- Statistical data analysis
- Mathematical modelling
- High-performance scientific computing
- Functional programming
- Didactics of physics

Hobbies

- Molecular cocktails, modern mixology, bartendering and gin
- Listening to blues and rock (expecially Eric Clapton, Joe Bonamassa, Mark Knopfler, Warren Haynes, Eric Johnson, Deep Purple)
- Reading books (I'm a proud fan of Dostoevskij)
- Typography (I love R. Bringhurst's *Elements of Typographic Style*, among my favourite fonts are MinionPro opticals, and I enyoj using LaTeX to implement typographic finesse)
- Walking with my Siamese cat Ciambella