

# Alessandro Marrella

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I'm a Software Engineer doing functional programming in Scala. I apply functional programming principles (such as immutability, total functions, referential transparency) and leverage category theory with patterns such as free monads and tagless final. I contribute to opensource libraries and services in the Scala ecosystem such as http4s, fs2 and apibuilder.

## Work Experience

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### Software Engineer

Jul 2017 – Now

*Gilt.com (HBC)*, Dublin, Ireland

I develop functional programs in Scala that serve personalized content across the HBC banners.

Currently I'm developing the GraphQL backend that will serve all the new stack and working on infrastructural tasks around a shared Kubernetes cluster such as introducing Istio, figuring out DNS and improving service observability with monitoring and tracing.

### Data Scientist & Big Data Engineer

Oct 2016 – Jul 2017

*AIB, Data Science and Solutions*, Dublin, Ireland

- Designed and developed a machine learning solution to predict and prevent drop offs in customer online journeys in real time collecting clickstream data from Kafka and processing it with Spark Streaming
- Developed a ETL application using Python, Scala and Apache Spark
- Developed an anomaly detection system with a lambda architecture using Hadoop, Kafka and Spark to identify issues on all the online channels and send alerts

### Data Anonymization Internship (MSc Thesis Research)

Mar 2016 – Aug 2016

*ABB AG, Corporate Research*, Ladenburg, Germany

- Implemented and extended privacy-preserving machine learning algorithms
- Evaluated on the impact of anonymization on data privacy and quality
- Published as first author the paper "Privacy-Preserving Outsourcing of Pattern Mining of Event-Log Data - A Use-Case from Process Industry" – listed below in the publications

## Education

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### Master of Science in **Computer Science**

Sep 2014 – Oct 2016

Major: Business Informatics

*University of Pisa*, Italy

GPA: 29.33/30.0 | Final grade: 110/110 *cum laude*

### Bachelor's Degree in **Business Administration**

Sep 2010 – Sep 2014

*University of Verona*, Italy

GPA: 27.3/30.0 | Final grade: 109/110

### Exchange year (**Erasmus** scholarship)

Sep 2013 – May 2014

*University College Dublin*, Ireland

## Publications

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Marrella, Alessandro, et al. "Privacy-Preserving Outsourcing of Pattern Mining of Event-Log Data-A Use-Case from Process Industry." *Cloud Computing Technology and Science (CloudCom)*, 2016 *IEEE International Conference on*. IEEE, 2016.

## Volunteer

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### Co-Organizer – *Dublin Scala Users Group*, Dublin, Ireland

Jul 2018 – Now

### Communication Manager - *Erasmus Student Network*, Pisa, Italy

Dec 2014 – Jul 2015

### Public Relations Officer - *Erasmus Student Network*, Dublin, Ireland

Jan 2014 – May 2015

### Emergency Medical Technician - *Croce Verde*, Verona, Italy

Dec 2012 – Sep 2013

## Skills

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*Programming languages:* Preference for functional programming in Scala or better. I have also knowledge in Python and Java. Learning Haskell.

*Cloud:* AWS, Kubernetes

*Foreign Languages:* *Italian:* native, *English:* fluent, *German:* basic