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 functional scala ecosystem such as fs2, http4s and apibuilder.

# Work Experience

**Software Engineer** *Jul 2017 – Now*  
*Gilt.com (HBC)*

I develop functional programs in Scala that serve personalized content across the HBC banners:  
Gilt.com (before it got divested in July 2018), Saks Fifth Avenue, SaksOFF5th and Lord&Taylor.  
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 introducting 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 able 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 metadata-driven ETL application using Python, Scala and Apache Spark

• Developed an anomaly detection system with a Lambda architecture leveraging Hadoop, Kafka and Spark able 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 of state-of-the-art 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

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

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

**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

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

Cloud: Experience with AWS & Kubernetes

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