





Gian Pietro Farina

Senior Software Engineer Snowflake Inc.

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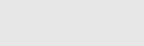
Languages

-  Italian 
-  English 

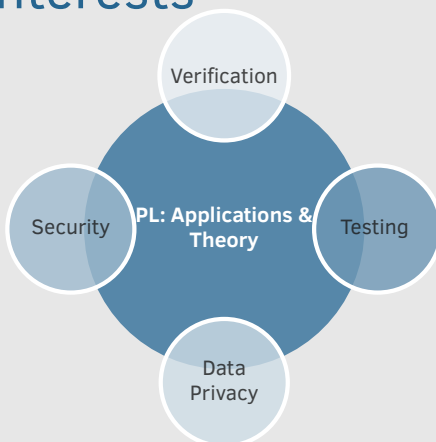
About Me

I am passionate about software and systems, and I thrive in environments where rigorous thinking and innovation intersect. I take a foundation-first approach: prioritizing deep understanding and thoughtful design before moving to implementation. I enjoy tackling complex problems and contributing to research-driven projects. I hold a PhD in Computer Science with a focus on formal methods for verification of relational properties such as differential privacy. In my free time I enjoy playing guitar, chess and studying philosophy.

Soft Skills

-  Communication 
-  Teamwork 
-  Problem Solving 
-  Time Management 
-  Helpfulness and Endurance 











Interests



Working Experience

- 02/2023- **Senior Software Engineer** **Snowflake Inc.**
Integration of a differential privacy engine into Snowflake's core data platform, enabling built-in, privacy-preserving analytics for customers. Worked across a Haskell-based backend and Java infrastructure, using Bazel and Git in a large-scale, production-grade environment.
- 01/2020-02/2023 **Software Engineer** **LeapYear Technologies Inc.**
Designed and developed a differential privacy-preserving engine in Haskell on top of Spark. Also, built a Python-based system to compute disclosure risk for observations based on historical time series. Experience with pytest, scipy, tensorflow.
- 05/2019-08/2019 **Long Term Visitor** **Harvard University**
Designed and developed oCaml a relational symbolic execution engine for R programs in oCaml.
- 01/2019-05/2019 **Long Term Visitor** **Simons Institute - UC Berkeley**
- 2015-2018 **Teaching Assistant** **SUNY University at Buffalo, NY**
- 03/2014-12/2014 **Penetration Tester** **Accenture, Prague**
Experience with OWASP methodology, ESXi, vSphere, Kali, Burp-Suite, NESSUS, mimikatz, Wireshark
- 10/2013-02/2014 **Information Security Analyst** **LUTECH, Milano**
Log Analysis with LogStash, Elasticsearch, Kibana, SNORT, statistical Analysis for Behavioural Anomaly Detection
- 10/2012-10/2013 **Cryptography Researcher** **ETH, Zurich**
- 01/2012-08/2012 **Cryptanalysis Researcher** **Aalto University, Helsinki**

Programming Languages and Verification Tools

- ✓ Java 
- ✓ Haskell 
- ✓ oCaml 
- ✓ C 
- ✓ R 
- ✓ Python 
- ✓ NuSMV Model Checker 
- ✓ Java Path Finder 
- ✓ TLA+ 
- ✓ Coq 

Education

- 2015-2020 **Doctorate in Computer Science** **SUNY - University at Buffalo, NY**
Thesis: Coupled Relational Symbolic Execution for Differential Privacy
- 2010-2012 **Computer Science, Master Degree (110/110 cum Laude)** **Università di Milano**
Thesis: Distinguishing Distributions Using One-Bit Linear Trails on PRESENT Cipher
- 2007-2010 **Computer Science, Bachelor Degree (110/110 cum Laude)** **Alma Mater Università di Bologna**
Thesis: Automatic Proofs of Classical Results in Computational Cryptography (Italian)

Publications

Coupled Relational Symbolic Execution for Differential Privacy, ESOP 2021, Relational Symbolic Execution, PPDP 2019, Differentially Private Bayesian Programming - CCS 2016, PrivInfer: A framework for differentially private Bayesian Programming - poster at TPDP 2016, Towards differentially private probabilistic programming - poster at NIPS 2014