

Dmytro BOGATOV

PhD student at Boston University |

Database Security, Secure Range Queries, Distributed Systems, ORAM

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Born in Ukraine in 1996



Originally from Ukraine, I started an undergraduate CS program at WPI. During the program, I have had a number of internships and have completed many research and industry oriented projects. I have graduated from WPI in 2017 with nearly perfect GPA and have enrolled at BU for a 5-years PhD program in Data Science. In the first two years I have completed the Master's program in Cyber Security. Currently, I am **looking for a research internship** in the area of **Distributed Systems, Database Security or Cryptography**. I am particularly interested in Secure Range Queries, Differential Privacy, ORAM and Zero-Knowledge Proofs.

SKILLS

Programming Languages	C#, TypeScript / JavaScript, Python, Java, C/C++, HTML, SQL, \LaTeX , Go, Bash, x86 ASM
Frameworks	.NET Core, ASP MVC, xUnit, Angular, boost::
Common skills	git, docker, bash, console, \LaTeX , VS Code
DevOps	Ubuntu / CoreOS, Kubernetes, CI / CD, infrastructure automation, NGINX, GitLab admin
Graduate classes	Advanced Algorithms, Cryptography, Advanced Database Systems, Advanced Operating Systems, Distributed Systems, Compiler Design, Applied Cryptography, Optimization Methods

EDUCATION

2013	High school (Lyceum 157 in Kyiv) graduation with high distinction. GPA 4.00.
2017	Bachelor of Science in Computer Science from WPI with high distinction. GPA 3.99.
2019	Master of Science in Computer Science with specialization in Cyber Security from BU. GPA 4.00.
Expected 2022	Doctor of Philosophy in Computer Science (Data Science) from BU. PUBLICATIONS

PUBLICATIONS

- [Bog+20] D. Bogatov, A. D. Caro, K. Elkhiyaoui, and B. Tackmann. "Anonymous Transactions with Revocation and Auditing in Hyperledger Fabric". 2020.
- [BKR19] D. Bogatov, G. Kollios, and L. Reyzin. "A Comparative Evaluation of Order-Revealing Encryption Schemes and Secure Range-Query Protocols". In: *Proc. VLDB Endow.* 12.8 (2019), pp. 933–947. doi: 10.14778/3324301.3324309.
- [NBK19] O. Narykov, D. Bogatov, and D. Korkin. "DISPOT: A simple knowledge-based protein domain interaction statistical potential". In: *Bioinformatics* (July 2019). doi: 10.1093/bioinformatics/btz587.
- [Bog17] D. Bogatov. "Analysis of a Dynamic Voluntary Contribution Mechanism Public Good Game". In: *IPE Journal* 26 (2017).
- [BH16] D. Bogatov and J. R. Hennessy. "Data MATTERS: Customizing Economic Indices to Measure State Competitiveness". In: *WPI Library* (2016).
- [Nur+15] B. Nurbekov, D. Bogatov, J. S. Xu, and R. J. O'Brien. "Investment Trading And Risk Management: Scientifically Developing and Analyzing Trading Systems". In: *WPI Library* (2015).

CONFERENCES (★ PRESENTED OR SCHEDULED TO PRESENT A POSTER, PRESENTATION OR A LIGHTNING TALK)

- ★ Encrypted Search Workshop at Brown
- ★ EUROCRYPT 2019 at Darmstadt, Germany
- ★ Northeastern Database Day 2019 at MIT
- ★ VLDB 2019 at Los Angeles
- Second Workshop on Encryption for Secure Search and other Algorithms
- ★ 23rd Annual Issues in Political Economy Conference
- ★ 2016 IEEE MIT Undergraduate Research Technology Conference

PAPER REVIEWS

2019 ICDE

2020 SIGMOD

2021 SIGMOD

PROFESSIONAL EXPERIENCE (RECENT / RELEVANT)

November 2019 | Software Developer Intern (Redshift team), AMAZON WEB SERVICES, INC., Palo Alto, CA

August 2019 | > Query processing optimization

[research](#) [databases](#) [big data](#) [performance](#) [distributed systems](#)

- December 2019 | Applied Scientist Intern (Crypto Algorithms team), AMAZON WEB SERVICES, Inc., Seattle, WA
- October 2019 | > Computations over encrypted data, SSE schemes
research
encrypted search
databases

- September 2019 | Cloud & Computing Infrastructure Intern (Crypto), IBM RESEARCH — ZÜRICH, Rüschlikon, ZH, Switzerland
- July 2019 | > Anonymous Transactions with Revocation and Auditing in Fabric
 > Developed production-grade cryptographic [Go library](#)
research
blockchain
hyperledger fabric
delegatable credentials
Go
identity mixer

- Present | All my past working experiences, ALL OVER THE WORLD, USA, Ukraine, Switzerland
- September 2014 | > PhD Student / Research Assistant @ **Boston University** (Boston, MA, USA)
 > Web / DevOps developer @ **RedwoodEDA** (Shrewsbury, MA, USA)
 > Co-founder / web developer @ **Shevastream** (Kyiv, Ukraine)
 > Web developer @ **Worcester Polytechnic Institute** (Worcester, MA, USA)
 > Web developer / Quantitative analyst @ **TradeStation Securities** (Plantation, FL, USA)
 > Senior Teaching Assistant @ **Computer Science Department at WPI** (Worcester, MA, USA)
teaching
web development
startup
devops

PROJECTS

- DIFFERENTIALLY PRIVATE ORAMS** SEP 2018 — PRESENT
[current technical report](#)
 Developing ORAM-based database backend satisfying Differential Privacy
C++
ORAM
differential privacy
range queries

- ANONYMOUS TRANSACTIONS IN BLOCKCHAINS** JUN 2019 — PRESENT
[github.com/IBM/dac-lib](#) [publication](#)
 Developed production-grade Go cryptographic library
Go
blockchains
research
cryptography
privacy

- EVALUATION OF SECURE RANGE QUERY PROTOCOLS** MAY 2017 — FEB 2018
[ore.dbogatov.org](#) [publication](#)
 Analyzed, implemented and evaluated 5 ORE schemes and 5 protocols
C#
.NET Core
research
ORE
range query protocols

- STATUS SITE** FEB 2017 — SEP 2017
[status.dbogatov.org](#) [source code](#)
 A multi-component system for collecting and analyzing the infrastructure health
C#
.NET Core
ASP MVC
TypeScript
Kubernetes
micro-services

- LOTS OF OTHER DIFFERENT PROJECTS** ALL THE TIME
[see my portfolio](#) [see me on GitHub](#)
 I do different projects all the time. See all of them on my personal website [dbogatov.org](#)
have
fun

LANGUES

English ●●●●●
 Ukrainian ●●●●●
 Russian ●●●●●

AWARDS

- > Chair's Fellowship at BU
- > "Outstanding Junior" at WPI
- > Dean's List all semesters at WPI
- > Charles O. Thompson Scholar at WPI
- > The Future of Ukraine project fair award in Kyiv

ACTIVITIES

- > Officer / IT manager at RSSA organization at WPI
- > Career Fair Volunteer at WPI

REFEREES

George Kollios
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