

# Dmytro Bogatov

<https://dbogatov.org>  
dmytro@dbogatov.org | 857.777.8350 | [linkedin.com/in/dmytrobogatov](https://www.linkedin.com/in/dmytrobogatov)

## OBJECTIVE

Looking for a research internship in the area of Database Security. Interested in Secure Range Query protocols, ORE / OPE schemes, ORAM.

## EDUCATION

### BOSTON UNIVERSITY

PHD IN COMPUTER SCIENCE  
SPECIALIZATION IN DATA SCIENCE  
AND CYBER SECURITY  
Expected May 2023 | Boston, MA  
Chair's Fellowship

### WPI

BS IN COMPUTER SCIENCE  
MINOR IN ECONOMICS  
Awarded Feb 2017 | Worcester, MA  
Dean's List (All Semesters)  
Graduation with High Distinction  
GPA: 3.97 / 4.00

## COURSEWORK

### GRADUATE

Cryptography  
Cryptography directed study  
Advanced Algorithms  
Advanced Database Systems  
Advanced Operating Systems  
Distributed Systems  
Compiler Design  
Optimization Methods

## SKILLS

### PROGRAMMING

Over 50,000 lines:

C#

Over 10,000 lines:

Swift • C/C++ • Java • TypeScript / JS  
Python • HTML • SQL •  $\LaTeX$

Intermediate level

Go • Bash • Scheme / ATS • CSS  
PHP • Pascal • x86 assembly

### DEVOPS

Ubuntu • Docker • Kubernetes  
CI / CD • Infrastructure automation  
NGINX • Git • Load balancing

## RESEARCH

### EVALUATION OF SECURE RANGE QUERY PROTOCOLS

| ACCEPTED, PENDING REVISIONS, VLDB 2019

March 2018 – February 2018 | Boston, MA

- A Comparative Evaluation of Order-Revealing Encryption Schemes and Secure Range-Query Protocols
- Analyzed, implemented and evaluated 5 ORE schemes and 5 protocols
- Recommended for revision at VLDB 2019 [ia.cr/2018/953](https://www.vldb.org/pvldb/2019/ia.cr/2018/953)

### DIFFERENTIALLY PRIVATE ORAM

| WORK IN PROGRESS WITH KALEPSO STARTUP

Sep 2018 – present | Boston, MA / Montreal, QC

- Developing ORAM satisfying Differential Privacy security guarantees
- Inventing and optimizing to improve the performance
- Current technical report [arxiv.org/pdf/1706.01552.pdf](https://arxiv.org/pdf/1706.01552.pdf)

### STRONGEST ORDER-REVEALING ENCRYPTION SCHEME

| WORK IN PROGRESS WITH GEORGETOWN UNIVERSITY

May 2018 – present | Boston, MA / Washington, DC

- Improving performance of the provably most secure ORE scheme
- Securing range queries beyond even ideal ORE
- Scheme to improve (not mine) at ASIACRYPT 2018 [ia.cr/2018/698](https://www.asiacrypt.org/2018/ia.cr/2018/698)

## EXPERIENCE AND INDEPENDENT PROJECTS

### REDWOOD EDA / STATUS SITE | WEB / DEVOPS DEVELOPER

February 2017 – August 2017 | Shrewsbury, MA

- Developed a large-scale micro-services application
- Developed the solution for a company, then open-sourced
- Working application instance [status.dbogatov.org](https://status.dbogatov.org)

### TRADESTATION SECURITIES

| SOFTWARE DEVELOPER / QUANTITATIVE ANALYST INTERN

June 2015 – August 2015 | Plantation, FL

- Led a team of five interns
- Designed and developed a Web Dashboard for clients
- Worked on .NET stack (ASP.NET / MS SQL / Windows Server)

## CONFERENCES

- Presented a poster at Northeastern Database Day 2019 at MIT
- Second Workshop on Encryption for Secure Search and other Algorithms
- 23<sup>rd</sup> Annual Issues in Political Economy Conference
- 2016 IEEE MIT Undergraduate Research Technology Conference

## AWARDS

Fall 2017	BU	Chair's Fellowship
May 2016	WPI	Certificate "Outstanding Junior"
All Semesters	WPI	Dean's List
Spring 2014	WPI	Charles O. Thompson Scholar