# Amit Somech Data Researcher / Security Expert

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| **Personal Profile:** | I am a computer-science PhD student (4th year), and a cyber-security consultant. I have a passion for data in all of its shapes and forms. |
| **Research Interests** | My Thesis is focused on building a computational framework for facilitating data analysis and data science, making them more accessible and convenient to the general public. I'm interested in: *Interactive Data Exploration, Data Science, Deep Reinforcement Learning, Information Extraction, Semantic Web* |
| **Professional Experties:** | Computer and network security, Practical machine learning and data mining. |
| **Key Qualities:** | End-to-End Project execution: from a concept to a proof-of-concept in minimal time<br>Motivating people into radical ideas<br>Interdisciplinary thinking |

# Education

### Ph.D, Computer Science (2015-Present)
Tel-Aviv University, Israel
Research areas: Interactive Data analytics, semantic graph processing,
Thesis title: *Context-sensitive computation in data management applications*

### M.Sc., Computer Science (2011-2014)
Tel-Aviv University, Israel
Thesis: *Ontology Driven Crowd Mining*

### B.Sc, Computer Science & Middle East History (2005-2008)
Haifa University, Israel

### IDF (Intel.) Elite Military Academy - "Havatsalot" (2005-2008)
Elite 3-years program aimed to train multi-skilled intelligence officers.

# Teaching

**2015-Present:**
> **Database Systems, (Teacher Assistant)**
> Tel-Aviv University, Israel

> **Workshop in Data Science (Teacher Assistant)**
> Tel-Aviv University, Israel

# Professional Experience

### Senior cyber security consultant, Sygnia.   (2015-Present)
Participated and led Incidence Response projects, responsible for investigating, identifying and mitigating cyber security threats and live attacks.

### Consultant, Epistema (2015)
Consulted for a funded startup company focused on collaborative knowledge management solutions for enterprises. Assisted in shaping data models and algorithms for crowd based applications, and embedding them in a commercial product.

### Web App. security team leader, Unit 8200 (2011-2014)
Led a team of 14 web application security experts. We executed complex and innovative projects (included both research and development) in a web environment, computer network, and mobile security.

### Server side developer at Weesh (2012).
Joined a startup company for a 2-month stay in NYC, for participating in a startup acceleration program by DreamIt Ventures. I was responsible for the back-end development (PHP/MySQL env.) and server-side security.

### Network Security Researcher, Tech. Unit of the IDF Intelligence corps. (2008-2011).
Performed applied research in the fields of Windows based systems, computer network and application security.

# Skills and Abilities

### Computer & Network Security
I'm well experienced with web application and enterprise network security.

### Machine Learning & Data Science
Hands on experience in deep learning programming environments: Tensorflow, Torch.
Data Science in Python: Pandas, Numpy/Scipy, Scikit-learn

### Programming
**Fluent:** Python, JavaScript,
**Intermediate:** PHP, C, C++

### Data Management
RDBMS: MySQL, MsSQL
NoSQL: Solr, Neo4j

### Personal Skills and Interests
Classic pianist
Electronics: I fix and refurbish old electronic devices: tube TVs, transistor radios, etc.
Maintaining a cheesecake reviews blog (eatcheesecakes.com)

# Publications

**2018:**

### Next-Step Suggestions for Modern Interactive Data Analysis Platforms.

Amit Somech, Tova Milo, KDD 2018

### Deep Reinforcement-Learning Framework for Exploratory Data Analysis

Amit Somech, Tova Milo, AiDM, SIGMOD 2018

**2016:**

### December: A Declarative Tool for Crowd Member Selection

Yael Amsterdamer, Tova Milo, Amit Somech and Brit Youngmann, VLDB 2016

### REACT: Context-Sensitive Recommendations for Data Analysis.

Tova Milo and Amit Somech, SIGMOD 2016

**2015:**

### Managing General and Individual Knowledge in Crowd Mining Applications

Yael Amsterdamer, Susan B. Davidson, Anna Kukliansky, Tova Milo, Slava Novgorodov and Amit Somech, CIDR 2015

**2014:**

### Ontology Assisted Crowd Mining

Yael Amsterdamer, Susan B. Davidson, Tova Milo, Slava Novgorodov and Amit Somech, VLDB, 2014.

### OASSIS: Query Driven Crowd Mining

Yael Amsterdamer, Susan B. Davidson, Tova Milo, Slava Novgorodov and Amit Somech, SIGMOD 2014