



# Basel Shbita

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## EDUCATION

### UNIVERSITY OF SOUTHERN CALIFORNIA (USC)

PH.D. CANDIDATE, COMPUTER SCIENCE  
2018 - Present | Los Angeles, CA, USA  
Research Interests: Knowledge Graphs, Machine Learning, Information Extraction & Integration, Semantic Web

### TEL AVIV UNIVERSITY

B.Sc. ELECTRICAL ENGINEERING  
2011 - 2015 | Tel Aviv, Israel  
Specialization Areas: Computer Science, Communications & Electronic Devices

## AWARDS

### UNIVERSITY OF SOUTHERN CALIFORNIA (USC)

University Outstanding Teaching Assistant Award (Highest Achievement, grant valued \$1k)  
2022 | Los Angeles, CA, USA

### ALEXA PRIZE SOCIALBOT GRAND CHALLENGE 4

Team research grant valued \$250k as part of the competition (Semi-finalists)  
2021 | Seattle, WA, USA

### MOMACS INSTITUTE

Ford Foundation Graduate Student Grant (\$1.6k)  
2019 | Pittsburgh, PA, USA

### TEL AVIV UNIVERSITY

Faculty Dean's List of Outstanding Undergraduate Students  
2013 | Tel Aviv, Israel

### TEL AVIV UNIVERSITY

"Freescale Semiconductor" Excellence Scholarship (\$1.2k)  
2013 | Tel Aviv, Israel

## SKILLS

### LANGUAGES

English  
Arabic  
Hebrew  
Russian

### PROGRAMMING

Python, C, C++, C#, SWI-Prolog, MATLAB, Assembly • RDF/OWL, SPARQL, SQL, PostgreSQL, PostGIS • TensorFlow, PyTorch, Keras, scikit-learn, pandas, SciPy, NumPy, Matplotlib, Jupyter, Flask • Ruby on Rails, HTML, CSS, JavaScript • Git • Docker

## EXPERIENCE

### INFORMATION SCIENCES INSTITUTE

RESEARCH ASSISTANT, CENTER ON KNOWLEDGE GRAPHS

Aug 2018 - Present | Marina del Rey, CA, USA

- Working on knowledge graphs & the semantic web with an emphasis on data normalization as a means to solve complex information integration problems
- Investigating new methods to leverage machine & deep learning techniques to establish automatic data understanding & knowledge graph construction
- Partaking in several projects: MINT (data integration for scientific modeling), Linked Maps (constructing KGs for spatio-temporal data) & Table Understanding (automated semantic interpretation of tables)

2018 - PRESENT

### GENERAL ELECTRIC GLOBAL RESEARCH

RESEARCH FELLOW INTERN, ANALYTICS SOFTWARE & KNOWLEDGE DISCOVERY

May - Aug 2021 | Niskayuna, NY, USA (online)

- Designed, implemented & evaluated an infrastructure for automated generation of annotation rules for control concepts in Cyber-physical Systems SW using ILP & Semantic Technologies

2021

### APPLE

EMBEDDED FIRMWARE ENGINEER, FLASH STORAGE SOFTWARE DEPARTMENT

Jan - Jun 2018 | Herzliya, Israel

- Designed & developed complex SW modules for ultra high performance, real-time embedded systems in a multiprocessor environment for Apple products
- Defined firmware features & led vertical integration with other modules in storage stack (i.e. drivers, file-system)

2018

### MELLANOX TECHNOLOGIES

SENIOR FIRMWARE ENGINEER & TEAM LEADER, SWITCH SILICON CORE DEPARTMENT

Apr - Jun 2017 | Tel Aviv, Israel

- Managed team of 5 engineers
- Led the 100GbE Switch Systems firmware development process & verification activities - an agile operation involving 16 engineers
- Developed a distributed functional testing environment, debug tools & performance testing in C++ in Unix for both Ethernet & InfiniBand fabrics in Data-Link & Network layers of the OSI (static & dynamic analysis)
- Delivered technical presentations to 50+ developers from various teams
- Awarded for excellence & ranked "Superior" (top 5% out of 3000)

2011 - 2017

### TEAM LEADER FIRMWARE ENGINEER, SWITCH SILICON CORE DEPARTMENT

May 2015 - Mar 2017 | Tel Aviv, Israel

- Managed team of 3 engineers
- Contributed to end-to-end development for the company's 100GbE Switch products & led a full silicon bring-up process: Pre & Post-Silicon
- Conducted personal training, code reviews; defined coding-style & methodologies of software engineering for team of 30
- Optimized shared library cross-platform code, resulting in ~40% reduction in project compilation time for 90+ department developers
- Supervised remote testing & integration processes operating in China & USA

### FIRMWARE ENGINEER, SWITCH SILICON CORE DEPARTMENT

Mar 2014 - Apr 2015 | Tel Aviv, Israel

- Implemented simulation tool to reduce ~50% time in firmware development cycle
- Developed "Stress" tool that has become major tool for system production/screening, power measurements & debug process

### FIRMWARE STUDENT, SWITCH SILICON CORE DEPARTMENT

Oct 2011 - Feb 2014 | Tel Aviv, Israel

- Developed ANSI-C compiler-specific code to run on Switch Systems RISC
- Managed & optimized Python-based regression systems

### HP AUTONOMY (VIRAGE)

COMPUTER SCIENCE RESEARCH INTERN, ADVANCED TECHNOLOGY GROUP

May - Aug 2009 | Cambridge, MA, USA

- Researched Statistical Natural Language Processing, Speech Recognition & Machine Learning as part of the Research Science Institute (RSI) under the sponsorship of CEE and MIT

2009