



# Basel Shbita

<https://basels.github.io/> | [basel921@gmail.com](mailto:basel921@gmail.com) | Los Angeles, California, USA

## EDUCATION

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

**TEL AVIV UNIVERSITY**  
B.SC. ELECTRICAL ENGINEERING  
2011 - 2015 | Tel Aviv, Israel  
Specialization Areas: Computer Science,  
Communications & Electronic Devices

## INTERNSHIPS

**GENERAL ELECTRIC GLOBAL RESEARCH**  
RESEARCH FELLOW INTERN  
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

**RESEARCH SCIENCE INSTITUTE**  
RESEARCH INTERN (COMPUTER SCIENCE)  
2009 | Cambridge, MA, USA  
Studied & practiced Statistical Natural  
Language Processing, Automatic Speech  
Recognition & Machine Learning.  
Research hosted by HP Autonomy & MIT

## AWARDS

**ALEXA PRIZE SOCIALBOT GRAND CHALLENGE 4**  
Team research grant valued \$250k as part of the  
competition (Semi-finalists)  
2021 | Seattle, WA, USA

**MOMACS INSTITUTE**  
Recipient of the Ford Foundation MWS19  
Graduate Student Travel Grant (\$1.6k)  
2019 | Pittsburgh, PA, USA

**TEL AVIV UNIVERSITY**  
Faculty Dean's List of Outstanding  
Undergraduate Students & "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** **2018 - PRESENT**  
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)

**APPLE** **2018**  
EMBEDDED FIRMWARE ENGINEER, FLASH STORAGE SOFTWARE DEPARTMENT  
Jan 2018 - June 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)

**MELLANOX TECHNOLOGIES** **2011 - 2017**  
SENIOR FIRMWARE ENGINEER & TEAM LEADER, SWITCH SILICON CORE DEPARTMENT  
Apr 2017 - June 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)

**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