# Gabriel Zaccak

**Contact Information**

858 Northampton Dr.
Palo Alto, CA, 94303, USA

*mobile* (617) 943-2846

gabi@csail.mit.edu
linkedin.com/in/gabriel-zaccak

**Work Experience**

February 2022 - July 2023: **SVP AI, Sharecare**, Palo Alto, CA

Led development and implementation of AI initiatives to support Sharecares mission of providing personalized and comprehensive health and wellness experiences.

**Responsibilities:**

- Integrating Generative AI capabilities into WeCare, Sharecare's travel application.
- Leading the development of AI Nudges recommendation system (to improve patient engagement and treatment adherence).
- Overseeing the development of ML models to bring vocal and visual biomarkers from research to clinical use.
- Developing and deploying edge ML models–involving, for instance, medication identification from images and smart selfies.

October 2020 - February 2022: **Director of AI Engineering, doc.ai**, Palo Alto, CA
**(Acquired by Sharecare in March 2021)**

Led the AI Engineering platform and solution teams to build an in-house healthcare data/ML platform; accelerated the discovery, development, and deployment of ML models in HITRUST environments and on the edge.

Oversaw the research and development of machine learning models to identify high-cost member populations and cost-of-care trends. Additionally, my team created low-code solutions for Anthem Care Management and actuarial teams, enabling them to use our models to intervene and redirect high-risk members to lower-cost care trajectories.

January 2020 - October 2020: **Senior Principal Engineer, doc.ai**, Palo Alto, CA

Led the Privacy Preserving Group in developing a production-grade federated learning and private computing framework for healthcare. My team was the first outside of Google to support full TensorFlow model training on mobile phones. We open sourced our library–Tensor/IO–to democratize federated learning.

March 2016 - January 2020: **Sr. Research Software Engineer Tech Lead, Authess**, Boston, MA **(Acquired by Elsevier in Jan 2020)**

As a Founding Engineer at Authess, I drove the development of an open-ended assessment platform, leveraging deep learning techniques to enhance employers ability to pinpoint job ready candidates beyond mere test proficiency.

June 2014 - August 2014: **Engineering Intern, Shell**, Cambridge, MA

Engineered a user-friendly, efficient database-mining tool, enabling targeted searches across key themes and facilitating easy organization, storage, and sharing of results.

June 2011 - August 2011: **Engineering Intern, Google**, Mountain View, CA

Interned with the Google search quality team. Verified learning-to-rank challenge-winning algorithms results, performed sensitivity analyses, and investigated new ways to perform feature selection to improve performance.

June 2009 - August 2009: **Engineering Intern, Google**, New York, NY

Interned with the Google Finance team. Improved the ranking of financial news articles shown on stock price charts, analyzed stock price fluctuations and price changes related to the market, identified articles that matched the discovered trends, and boosted their ranking score.

September 2000 - May 2004: **Software Developer, Dalet Digital Media Systems**, Beer-Sheva

Lead developer of Dalet Distributed Services (DDS), a framework for intelligent agents residing in the network, allowing users to interact and manipulate sets of agents to perform specific tasks. I helped generate innovative solutions, coached junior programmers, and successfully implemented customized versions of the product.

EDUCATION

2004-2017 **Massachusetts Institute of Technology**, Cambridge, MA

**Ph.D. Candidate in Computer Science, ABD (All but Defense)**

**Projects**
- Natural language dialog system for Web services: automatic discovery of the underlying structure and API of Web Services; researched and prototyped models that learned to map user queries to a corresponding series of actions.
- Wrapper generation: automatic wrapper induction and information extraction from Structured and Semi-Structured websites for Q&A systems.
- Online lecture processing: application of machine learning techniques to align, segment and summarize spoken language from lecture domain.

**M.Sc. in Computer Science and Artificial Intelligence, May 2007.**
Wrapster: Semi-Automatic Wrapper Generation for Semi-Structured Websites
**Advisor:** Boris Katz

1998-2001 **Ben Gurion University - Department of Computer Science**, Beer-Sheva

**B.Sc. Dual Degree in Computer Science and Mathematics**
Received Best to Industry scholarship (sponsored by private companies), which enabled me to gain professional experience. For my final research project, I designed and developed a constraint-based web publishing portal for Dalet Company under the supervision of Prof. Michael Elhadad. The portal was deployed on the France 2 TV website.

TEACHING EXPERIENCE

**Teaching Assistant**
- ❑ Machine Learning (6.867): Fall 2009 and 2010.
- ❑ Elements of Software Construction (6.005): Spring 2010, 2011 and Fall 2014.
- ❑ Natural Language Processing (6.863): Spring 2009.
- ❑ Computer Graphics (6.837): Fall 2013.

NATURAL LANGUAGES

- ❑ Native speaker of Arabic and Hebrew.
- ❑ Fluency in French and Spanish.

SELECTED PAPERS AND PROPOSALS

PuPill - A Model For Identifying Medications From Images Of Packaging (ICML 2022)

Natural Language Assistant for Routine Web Tasks (Ph.D. Thesis proposal)

Answering English Questions using Foreign-Language, Semi-Structured Sources (ICSC 2007)

Wrapster: Semi-Automatic Wrapper Generation for Semi-Structured Websites (Master thesis) (Short version, not published)