Leo Goldstien

Research Engineer

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I'm a strong research professional with a varied skill set. I love working on teams and excel at finding creative solutions to complex problems. For the past several years my professional life focused on R&D in the Cybersecurity sector and management of cloud systems.

Peer Reviewed Publications

June 2015 **"Universal Approach to FRAP Analysis of Arbitrary Bleaching Patterns"**.
D.Blumenthal, L. Goldstien, M. Edidin, L. A. Gheber. Lead Java developer - method development, enhancement and analysis. Published in Nature Scientific Reports: www.nature.com/articles/srep11655

Education

2014–2017 **Master of Science**, *Department of Biotechnology Engineering*, Ben Gurion University, Beer Sheba, Israel.
Thesis title: "Real Time Measurement of Protein Binding for Biosensing Applications"

2010–2014 **Bachelor of Science**, *Department of Biotechnology Engineering*, Ben Gurion University, Beer Sheba, Israel.
Engineering project title: "Label-Free Sensing of Water Pollutants"

Technical & Computer Skills

Cybersecurity	Protocol analysis, hard drive hacking, vulnerability assessment, network security, proof of concept & prototype development
Coding & IT	Python, Java, C#, Linux, network administration, Docker, Kubernetes
Disaster Recovery	Forensic data recovery, non-destructive data imaging, hard drive firmware analysis, HDD & SSD forensics, expert PC-3000 technician
Data Science	Pandas, NumPy, Matplotlib, data preprocessing, Exploratory Data Analysis (EDA), descriptive & inferential statistics
Research & other skills	Data analysis, proposal writing, report writing, literature reviews, feasibility analysis, communication of scientific concepts to audiences of varied backgrounds

Employment History

2021-now **Cloud Engineer**, *Nakisa*, Montreal, Quebec, Canada.
As a member of the Cloud team I routinely:
- Automate our cloud platforms & application of network controls (AWS, boto3, Python)
- Develop automation solutions for reproducible deployments (Ansible, AWX, Tower)
- Design & deployment of high availability cloud micro-services (Docker, Kubernetes)
- Exploring new solutions and introducing them to production infrastructure
- Support & educate colleagues regarding migration to cloud platforms (AWS, Azure)

2020-2021 **Systems DevOps Engineer**, *FiveSky*, Montreal, Quebec, Canada.

Contingent employee at Morgan Stanley Perimeter Mail Squad. My role revolves around implementing & evangelizing DevOps principles in support of managing an enterprise email security platform. I routinely work on:

- Renovating outdated/broken internal webapps (Panel & Holoviz ecosystem)
- Configuration auditing and data analysis (Pandas, DeepDiff)
- Monitoring & dashboarding (Pandas & Holoviz ecosystem)
- Developing domain specific code (Python, Bash)
- Developing & leveraging automation for reproducible deployments (Ansible)
- Documenting & communicating squad milestones on internal firm websites
- Identifying possible efficiency improvements & securing stakeholder buy-in

2019-2020 **Research Engineer**, *HCL AppScan*, Herzliya, Israel.

As a member of the Aleph Research team (by HCL AppScan), I split my time between doing exploratory research, building Proof of Concept systems, and doing security analysis on network traffic. My achievements include:

- Security analysis of SonarQube, a popular security testing tool for SDLC pipelines, and authoring of a detailed report comparing the competitiveness of the group's product to that of SonarQube.
- End to end development of a custom DNS server for security testing, currently in production (Python running on Alpine Linux, dockerized).
- Analysis of SMTP traffic to identify the root cause of a false positive (WireShark).
- Prototyped a security static analysis platform for modern versions of PHP (multi-platform development in C# & Java).
- Writing a tutorial for Z3, a SMT solver from Microsoft Research, using Python & Jupyter: SMT Solvers for WebApp Security.
- Support in the form of Dockers, data preprocessing, light DB work & general brainstorming on a big data project analyzing scan logs (Python, MongoDB, Pandas)
- Writing production level, peer-reviewed code (Python, C#, Java, Git, Jira).

2016-2019 **Cybersecurity Researcher**, *Insert Technologies*, Beer Sheba, Israel.

Analysis of vulnerabilities in hard drive firmware, reverse engineering vendor specific APIs, protocol analysis and reverse engineering. My achievements include:

- Protocol analysis of major HD manufacturers (WD, Seagate) & reverse engineering undocumented commands
- Forensic & structural analysis of hard drives
- Development of userspace software for accessing hard drives using low-level ATA commands (Python, C, Windows, Linux)
- Presentation of project to possible clients & marketing efforts for further funding

In 2018 I was promoted to Lead Cybersecurity Researcher where my responsibilities included:

- Design & implementation of novel technology for protecting HD devices
- Coding additional features for company platform utilizing TDD principles (Python, C)
- Authoring research proposals & reports
- Presentation of projects to customers and negotiation of project requirements

2013-2017 **Research assistant**, *Prof. Levi Ghebers lab for NanoBioTechnology*, Ben Gurion University, Beer Sheba, Israel.

Preformed active research in the field of biosensing

Notable achievements:

- Designed and built a multi-laser microscopy control system. System was made up of a mixed control environment (LabView, Java, C), contained real-time image analysis software (Java) and custom circuit boards
- Designed and coded simFRAP - an ImageJ plugin (Java) for analyzing FRAP experiments. plugin & source available here

Teaching Engagements:

- **Lecturer** - *Treatment & Analysis of Numerical Data*, Winter Semester 2015
- **TA**: *Bioreactor Design & Kinetics B*, Spring Semester 2015, 2016
- **TA**: *Treatment & Analysis of Numerical Data*, Winter Semester 2014
- **Lab Instructor**: *Optics & Light Microscopy Lab*, Spring Semester 2014, 2016, 2017

Languages

English **Mother tongue**

Hebrew **Mother tongue**

Russian **Fluent speaker**