

Adir Barda

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ABOUT ME

B.Sc. Computer Science graduate from Tel Aviv University with strong programming skills in Python, C, Java, x86 Assembly, SQL, and JavaScript. Highly organized and detail-oriented, with a deep understanding of complex systems and a commitment to excellence. Skilled in problem-solving, data structures, algorithms, software development, security, and machine learning. Enthusiastic about learning and contributing across various technology stacks, including full-stack development. Seeking a junior software development role to leverage my technical expertise and adaptability.

EDUCATION

Tel-Aviv University | B.Sc. Computer Science | GPA: 84 (GPA: 93 in last year) | 2020-2024

- **Relevant Courses:** Compilation (100), Data Structures (87), Algorithms (83), Operating Systems (85), Information Security (86), Complexity (88), Communication Networks (93), Software 1 (94), Computer Structure (82), Logic for Computer Science (82), Big Data Systems (92)

Ironi Aleph High School | Matriculation with Excellence | 2014-2016

- Adjusted Bagrut average according to TAU Calculator: 117 (the maximum).
 - **Achievements:** 5 Points in Math (100), Physics (100), Chemistry (99). Graduated with a first-class honors certificate.
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ACADEMIC EXPERIENCE

Information Security | B.Sc. Course:

- Gained **hands-on experience** in various areas of information security through weekly exercises.
- Proficient in using IDA for reverse engineering, binary patching, and executing shellcode attacks (including polymorphic and remote code execution).
- Explored return-to-libc and return-oriented programming (ROP), network vulnerabilities using Scapy, and logical vulnerabilities.
- Acquired expertise in web vulnerabilities, including injection attacks, XSS, CSRF, and debugging with Chrome Developer Tools.
- Successfully identified and mitigated vulnerabilities in a complex web application.

Lattice Generation | Computational Learning Workshop, B.Sc. Course:

- Collaborated with three classmates on a project studying the propagation of interacting quantum particles on 1D disordered lattices (quantum random walk).
- Used NVIDIA's StyleGAN2 to train on numerically calculated correlation matrices of lattices with random energy sites, replicating our instructors' results.
- Implemented Co-Mod-GAN to determine lattice site energies from correlation matrices (the inverse problem).
- Also explored fully connected neural networks for inverse problems and denoising, demonstrating significant progress.
- Highlighted potential applications in quantum simulations and computations, improving model accuracy and efficiency.

(For more information about this project, visit my LinkedIn profile.)

K-means Clustering | Software Project, B.Sc. Course:

- Developed a Python-C hybrid implementation of a normalized spectral clustering algorithm using advanced graph theory concepts.
 - Optimized clustering algorithms and integrated modular, efficient code, relevant to real-world algorithmic and software development contexts.
 - Collaborated with a team to build complex algorithms, ensuring code quality and performance.
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SKILLS

Programming Languages: Python, C, Java, MIPS & x86 Assembly, SQL

Web Technologies: HTML, CSS, JavaScript

Algorithms and Data Structures: Practical experience through coursework and academic projects.

Operating Systems: Proficient in Linux OS, including shell commands and kernel modules.

Data Analysis Tools: Experienced with Jupyter Notebooks and Python scientific data libraries. Proficient with database systems such as MySQL and relational modeling. Knowledgeable in big data systems such as Cassandra, Amazon's Dynamo, and Google's Bigtable.

Machine Learning: Familiar with Python machine learning libraries and experienced in working with Generative Adversarial Networks (GANs), specifically [StyleGAN2 by NVIDIA](#), including training and generating processes.

Other Tools: Git, GitHub, Slurm Workload Manager.

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MILITARY SERVICE

Air Force | Armament Systems Technician | Palmachim Airbase | 2016-2019

Led and commanded a team of soldiers, holding a classified position requiring decision-making under stress. Managed logistics and operations, including emergency personnel deployment.

LANGUAGES: Hebrew (Native), English (Fluent)

HOBBIES: Basketball, Video Games, Travelling

REFERENCES: Upon Request