6 EFI ARAZI SCHOOL OF COMPUTER SCIENCE

Combining deep theoretical studies with up-to-date knowledge

Prof. Yacov Hel-Or, Dean

Efi Arazi z"l

/// NEW B.SC. IN COMPUTER SCIENCE WITH A SPECIALIZATION IN COGNITION AND BRAIN RESEARCH

The Efi Arazi School of Computer Science and the Baruch Ivcher School of Psychology are jointly offering a new B.Sc. in Computer Science with a specialization in Cognition and Brain Research. Students in the program will focus on exploring human mental capacities and brain infrastructure, and will learn principles from neuroscience, neuro-genetics, the evolution of cognition and emotion, perception, attention, memory, learning, and creative thinking. The program is designed for students interested in becoming acquainted with the behavioral and cognitive sciences, along with neuroscience research, neural computation, and machine-brain interfaces.

/// M.SC. IN MACHINE LEARNING AND DATA SCIENCE

As part of Reichman University's commitment to prioritizing new technologies, the Efi Arazi School of Computer Science offers an innovative intensive M.Sc. program in Machine Learning and Data Science, aimed at providing in-depth theoretical and practical understanding of machine learning, data analysis and data-driven technologies. Now in its fourth year and headed by Prof. **Zohar Yakhini**, the program offers a series of rigorous mandatory courses, including statistics, machine learning, deep learning, and big data platforms. Also on offer is a wide variety of elective courses, in which the students are exposed to machine learning applications in different domains. The students gain experience in real data science work through course work and by doing a practical final project.

"The program is offered through the Efi Arazi School, which allows the students to gain a rigorous understanding of algorithms and statistics. We also leverage existing platforms within the school, such as the ***CONNECT*** Computer Science Affiliation Program, to facilitate collaborations with partners in the high-tech industry," said Dr. **Leon Anavy**, the program's Academic Director.

QueenB middle school students at Reichman University

/// PARTNERSHIP WITH QUEENB

Students from the Efi Arazi School have joined the QueenB initiative, a program that aims to give female middle school students a taste of the worlds of coding and computer science and increase the number of women in the high-tech industry. Women currently make up less than 30 percent of high-tech employees in Israel.

"Our goal as instructors is to convey the material in the best and most interesting way, alongside the message that anyone can do it," said **Stav Yemin**, coordinator of the program and a second-year Computer Science student at Reichman University. She said the school students are primarily taught programming and website-building skills. Eighth-grade students, who mostly have no prior knowledge, are taught basic programming, while ninth-graders learn more advanced material. In 10th grade, the students are invited to make a personal commitment to QueenB and help the instructors in the meetings with younger participants.

During the program the students also hear from inspiring women in the industry about their experiences.

The Reichman University students who participate in this program receive a scholarship funded by our ***CONNECT*** affiliation program.

/// NEW COLLABORATION WITH ISRAELI UNICORN MONDAY.COM

Much has been said about the high-tech problem, and the paradox of today's labor market. On the one hand, there is a huge shortage of skilled workers and on the other hand, fresh graduates with a bachelor's degree, have difficulty finding their first job as companies are looking for proven experience and if possible, proven talent.

The ***CONNECT*** Computer Science Affiliation Program at the Efi Arazi School of Computer Science addresses this challenge and attracts dozens of new companies who join the program in order to have the opportunity to connect with undergraduate and graduate students during their study phase in a variety of capacities – project facilitation, guest lectures, courses and workshops delivered in close collaboration with the companies. In turn, scholarships are provided to excelling students.

Companies can also connect with the academy, and their employees are invited to courses as free listeners where they are exposed to the forefront of research in various fields. They are also invited to conduct collaborative research with our students. "It's a net profit for all parties – the students, the companies and the school," says Prof. **Anat Bremler-Barr**, Academic Director of ***CONNECT***. "Academic studies are enriched with the content and technologies of the high-tech industry, and the ***CONNECT*** program is able to provide opportunities which include scholarships for excellent students.

The new collaboration with monday.com, an Israeli unicorn is very exciting and has taken the program to the next level. The company has created a monday.com community on campus where students receive scholarships on behalf of monday.com, and enjoy enrichment activities by the company."

Yuval Azulay, Vice President of Programs at monday.com elaborates on the company perspective, "We are proud to take part in this important dialogue between academia and the industry. We see this as an opportunity to proactively support the career growth of future computer science engineers, even before they enter the job market."

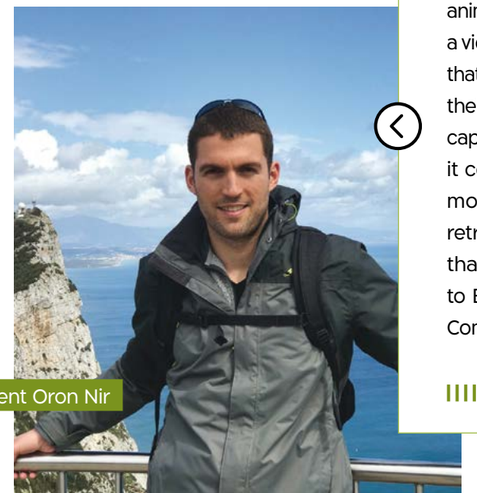
Other companies who have joined the program include Microsoft, Salesforce, Red Hat, WhiteSource, CrazyLabs and Similarweb. **Gili Dinstein**, CEO of Friends of Reichman University and External Relations Israel, is proud that "so many companies have joined the program, either because our graduates are in key positions in those companies, entrepreneurs have recommend it to them or simply because of the excellent reputation of the school."

For more information:
https://www.runi.ac.il/en/schools/computer-science/connect-program/

Prof Anat Bremler-Barr

/// SPOTLIGHT ON PH.D. STUDENT ORON NIR

"Video understanding is a field of artificial intelligence which fascinates me, particularly in relation to animation. This domain presents many unique challenges, which is why I've decided to pursue my passion in my postdoctoral studies under the supervision of Prof. **Ariel Shamir**, Former Dean of the Efi Arazi School of Computer Science.
Animation presents many challenges because characters can change appearance as well as shape more drastically than in photorealistic (non-animated) movies. By tracking characters throughout a video, we have been able to learn a representation that groups them by identity, even when they change their outfits, pose and even their shape. This kind of capability has far reaching possibilities. For example, it could assist with analyzing the cast of a video, monitoring gender bias in animation, or when retrieving video highlights. I am pleased to advise that my research paper was recently accepted to Eurographics – the European Association for Computer Graphics."



Ph.D. student Oron Nir