RESEARCHER PROFILE

PROF. ONN SHEHORY

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HORIZON EUROPE TOPIC(S) OF INTEREST:

Call: Fighting Crime and Terrorism 2024 (HORIZON-CL3-2024-FCT-01)

FCT02 – Improved forensics and lawful evidence collection
Open Topic
HORIZON-CL3-2024-FCT-01-02
My team's specific focus: Machine learning techniques to identify and predict online human trafficking.

CONTRIBUTIONS TOWARD CALL TOPIC

Our research group specializes in the application of data analysis techniques, particularly machine learning, to address pressing societal issues. We are particularly interested in leveraging advanced data analytics to tackle the challenge of human trafficking. Our primary focus lies in analyzing online data from human trafficking-related websites, utilizing machine learning algorithms to detect patterns and trends indicative of human trafficking activity. By employing predictive modeling and data-driven approaches, combined with Natural Language Processing (NLP), we aim to identify potential cases of trafficking early on and provide actionable insights to authorities and law enforcement agencies. Through our research, we aim to contribute to the prevention and mitigation of human trafficking, ultimately working towards creating a safer and more just society.

Our team brings extensive expertise in the application of artificial intelligence, machine learning, NLP and data analytics to address complex societal challenges. With a strong track record of successful research projects, we have demonstrated our capability to develop innovative solutions to make a meaningful impact. Additionally, I have substantial experience collaborating on and leading projects funded by the EU, further solidifying our commitment to addressing societal issues on a global scale.

BRIEF PROFILE

Onn Shehory is a prominent researcher known for his contributions to the fields of artificial intelligence and multi-agent systems, and in the application of machine learning and NLP techniques. His work primarily focuses on developing innovative algorithms and methodologies to enhance the coordination and collaboration among autonomous agents in complex environments and leveraging advanced machine learning approaches. Shehory's research spans various domains, including distributed artificial intelligence, agent-based modeling, and computational social systems, where he applies machine learning and NLP techniques to address real-world challenges effectively. He has made notable contributions to the development of artificial intelligence technologies for applications in diverse areas such as healthcare, social media and transportation, emphasizing the integration of machine learning for enhanced performance and adaptability. Additionally, Shehory has published numerous papers in top journals and conferences, showcasing his expertise and impact in the field. He serves as an editor for scientific journals and has organized multiple scientific conferences, further contributing to the dissemination of knowledge and advancements in his areas of expertise. His publications have been recognized with several prizes, highlighting the excellence and significance of his research contributions. Prof. Shehory additionally serves as the director of the Bar Ilan Data Science institute, leading and promoting AI and data science research across diverse disciplines.

RELEVANT PUBLICATIONS

1. Avizohar E, Shehory O. Predicting metabolic syndrome using machine learning – Analysis of commonly used indices. Health Informatics Journal. 2023;29(4)

2. Babayoff, O., Shehory, O., Geller, S. et al. Improving Hospital Outpatient Clinics Appointment Schedules by Prediction Models. J Med Syst 47, 5 (2023)

3. Babayoff O, Shehory O, Shahoha M, Sasportas R, Weiss-Meilik A (2022) Surgery duration: Optimized prediction and causality analysis. PLoS ONE 17(8)

4. Mazza O, Shehory O and Lev N (2022) Machine Learning Techniques in Blood Pressure Management During the Acute Phase of Ischemic Stroke. Front. Neurol. 12

5. Babayoff O, Shehory O (2022) The role of semantics in the success of crowdfunding projects. PLoS ONE 17(2)

6. Ackerman, S., Farchi, E., Raz, O., & Shehory, O. (2022). Experiment Based Crafting and Analyzing of Machine Learning Solutions. CoRR.

BAR ILAN UNIVERSITY PROFILE

Established in 1955, Bar Ilan University (BIU) is one of Israel's largest universities. BIU has achieved an international reputation for academic and research excellence, especially, but not limited to the fields of artificial intelligence, renewable energy, bio-medicine, brain sciences, cancer, cyber security, cognitive sciences, environment, quantum technologies, medicine, archaeology, nanotechnology and advanced materials.

Building on our past and current successes in FP6, FP7, H2020 and ERC projects, BIU is committed to strengthening its research and innovation infrastructure and supporting multidisciplinary innovative research initiatives with its 55 research centers and 60 endowed chairs.

The Information Systems group at the Bar Ilan Business School is renowned for its expertise in data analytics, cybersecurity, digital transformation, and AI for social good. Leveraging AI/ML techniques and access to state-of-the-art supercomputing facilities, our researchers excel in both theoretical frameworks and practical applications, tackling complex challenges facing modern organizations and society. Our collaborative culture fosters innovation, leading to impactful research outcomes and contributions to academia and industry alike.