ASAF SHUL

Software Engineer
AI Vision Researcher

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SKILLS

Programming skills
- Python
  PyTorch | lightning | Pandas | Numpy | huggingface | wandb | Optuna | xgboost | TSAI | plotly | Scikit-learn | TensorBoard | OpenCV | NLTK | SciPy |
- Java, C++, C, SQL, AWS

Relevant Knowledge
- Machine Learning
- Computer Vision
- NLP
- Algorithmic trading
- Image Process
- Data Visualization
- Big Data
- Git, Linux, GPU Clusters
- CAD (Solidworks, 3D slicers)

Spoken Languages
- Hebrew Native
- English
  Professional proficiency
  SAT score 145/150

PROFESSIONAL SUMMARY

Hands on computer scientist with a 'Hacker' mentality. Highly proficient in **Python** and experienced in **machine learning**. Particularly interested in **generative models** and **computer vision.** Passionate about **design**. Experienced in algorithm development using **ML** for fin-tech. Graduate with **Bachelor's degree in CS** and currently pursuing a **Master's degree**, specializing **in vision research** and **ML**.

EDUCATION

Master of Science in Computer Science |*The Hebrew University of Jerusalem | 2023 – Present*
Researcher in Prof. Yedid Hosen lab, specializing in Machine learning and Computer Vision

Bachelor of Science in Computer Science |*The Hebrew University of Jerusalem | 2020 – 2023*
Dean's list: Recognized for outstanding academic performance in 4 semesters during my second and third years, placing within **the top 5%** of computer science students at HUJI.

Coursework focused on data science and advanced machine learning techniques:

Intro to Machine Learning *(100)*, Algorithms *(100)*, Intro to AI*(92)*, Image Processing *(98)*, Applied Competitive Lab in Machine Learning *(96) and* Natural Language Processing *(90)*, Advance Machine Learning (generative models) *(100) and* Advance Natural Language Processing courses *(94).*

GPA – 88 (**93** on CS courses only) | *Psychometric Score of 740*

Independent Learning
Completed **Stanford**'s Machine Learning course by Andrew Ng (Online) | *2018*
Completed **Georgia Tech**'s Computer Vision course (cs 6476) (Online) | *2019*

EXPERIENCE

Algorithm engineer | *Algo Trading Startup (stealth mode) | 2021 – 2024*
Developed and deployed **real-time trading algorithms** using a blend of classical statistical methods and supervised **ML** models, playing a **critical role** within the company. **Developed methodology** and **designed comprehensive systems** using Python, from analyzing and processing financial data to implementing historical backtesting frameworks and **live AI algorithms**. Designed and implemented **architectures for large-scale code projects**, ensuring efficiency and scalability. Established and managed cloud environments on **AWS** for live deployment.

Dev Team Leader | *IDF's Intelligence technological unit 81 | 2019 – 2020*
Led a **multidisciplinary team of 8 engineers** and designers in developing solutions for special forces operations, encompassing **mechanical engineering**, **electronics**, **software**, and **design**.
Demonstrated skills in **project coordination**, **working under pressure**, **teamwork**, and **problem-solving** being a crucial part in large cross-organizational project.

Computer Vision developer | *IDF's Intelligence technological unit 81 | 2018 – 2019*
Applied Python **image processing** projects using OpenCV for **unmanned** operations, involving depth from stereo image and tracking, contributing to enhanced operational capabilities in new fields.

Mechanical Design Team Lead |*IDF's Intelligence technological unit 81 | 2017 – 2018*
Managed **product design** and **development** responsible for parts with manufacturing costs amounting to millions of dollars. Proficient in **CAD**, **3D modeling** and manufacturing processes.

Mechanical Designer | *IDF's special forces (sayeret matkal) | 2014 - 2017*
Utilized CAD software and applied **problem-solving skills** under **tight operational schedules**.

PROJECTS

Automatic language switcher for inhenced productivity | *LanguageSwitcher |2023*
Developed an **open source app** that detects the preferred language for the active working window based on user preferences and automatically corrects mistyped text in the correct language.
Started for Hebrew-English and later adapted by the community to more languages.

AI Assistant for group meal order optimization |*PickUsLunch |2022*
Contributed to the development of an **AI assistant** that utilizes various search algorithms to help groups of friends or co-workers find restaurants that best match their dining preferences.
"Just Eat" showed interest in the project, and later a meeting was made with their CTO explaining the algorithm.

Covid emergency vantilators conversion for hospitals |*2020*
Managed the mechanical design team for the IDF ventilators project in due to Covid-19 pandemic. (**Forbs**)

ACTIVISM
The Benjamin de Rothschild Ambassadors Program | *2021*
Kav-Hazinok | *a 10-year leadership program* | *2011-2021*

ACHIVMENTS
Chief of Military Intelligence creative thinking prize |*2018*

PUBLICATIONS
"On the Origin of Llamas: Model Tree Heritage Recovery" | *at Prof. Yedid Hosen's lab | 2024*
"Distilling Datasets Into Less Than One Image" | *at Prof. Yedid Hosen's lab | 2024*