

# Elad Oz

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## Summary

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A hungry young researcher/engineer with a passion for modelling and problem solving. I have a strong background in computer science and a solid foundation in rigorous mathematical analysis. Combined with a capacity for effective communication and collaboration as well as the powerful desire to enrich my knowledge and skills, I am excited to tackle new problems every day

## RESEARCH & WORK EXPERIENCE

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Quantitative Researcher (January 2021-present) - Pandtong Quantitative Research Ltd

- Conducted features engineering, hyperparameter tuning, fitting of LGBM model to predict returns of China index futures. Implemented & currently maintaining trading strategy driven by this model and others within our low latency C++ framework.
- Continuous R&D on predictive models (non-ML) for US equities, including model attribution, parameter optimization, implementation analysis and signal processing.
- Periodically conduct rigorous statistical analysis and optimization of trading strategies' performance and risk profile.
- Continuous R&D on signal-driven portfolio construction with risk control & practical constraints.
- Independently designed & led implementation of multi-source data infrastructure, including management of relationships with vendors, data transfer pipelines, quality assurance, relational algebra tasks such as mapping logic, and implementation of interface for trading framework (i.e. the user).
- Guided intern through development of time series analysis tools & study of China index futures statistical behaviour study.
- Currently in development:
  - Research & design cross sectional time series clustering model to group stocks together for trading purposes
  - Design & implement point-in-time database for reference data of US equities necessary for both alpha research & practical trading requirements

Electronic Engineering Capstone Project in Silicon Photonics (October 2020-June 2021) – Prof Haim Suchowski

- Independently strategized research procedure involving analytical extension and numerical simulation-based proof of concept for professor's earlier design for an integrated photonic device
- successfully found physical dimensions meeting necessary conditions by executing aforementioned procedure involving implementation of numerical simulation for data collection, design of a multivariate loss function and implementation of basic optimizer in Matlab

Silicon Photonics Research Assistant (June 2019) – Prof Lukas Chrostowski

- Implemented integrated photonic circuit simulation in field-specific scripting software's scripting language in support of Intel-backed research effort to minimize back reflections of laser in integrated circuit

Astrophysics Research Assistant (2018-2019) – Prof Amiel Sternberg

- Independently implemented simulation of model describing the change in relative molecular vs atomic hydrogen molecules in the interstellar medium using Matlab partial differential equation solvers and visualisation tools

## Education

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- B.Sc. Physics – Tel Aviv University (TAU): (2015-20) 87%
- B.Sc. Electronic Engineering – Tel Aviv University: (2015-20) 85%
- Study Exchange under EE programme - University of British Columbia (2018-2019)
- Exact Sciences Preparatory Year - TAU, Received grant for achievement of highest grade in program: (2014-15) 98.57%
- International Baccalaureate - West Island School Hong Kong (2011-13)

## Technical Skills

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**Programming** (ranked by proficiency): Python (incl most common ML libraries), C++, SQL, Matlab, linux bash

**Software engineering:** git, design of testing pipelines, architecture & maintenance of distributed data infrastructure & trading software, OOP design patterns, concurrent/parallel programming in Python, low latency architecture

**Machine Learning:** Learning theory, common models, preprocessing techniques, mostly financial datasets

**Mathematics & Computer Science:** CPU & computer memory structure, operating systems (basic), algorithms & data structures, Linear algebra, calculus, probability & statistics, financial mathematics, stochastic processes

## Others

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Languages: English and Hebrew (Native), Mandarin (intermediate)

NASM Certified Personal Trainer