

Aron Szanto

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/ Professional Experience

Razor, Inc. & Leiden University Medical Center · New York, NY · 2023—present
Chief Technology Officer and Principal Scientist (*Research Sabbatical at PROPARK Consortium*)

- Direct technical and scientific efforts for world's largest AI-enabled clinical trial for Parkinson's Disease, developing LLM-guided precision diagnostics and therapeutics for millions of patients

PathAI · New York, NY · 2022—2023

Head of Machine Learning Products

- Led four organizations of 80+ ML scientists and software engineers to build a 9-product portfolio for \$1B AI-powered pathology business, delivering FDA-cleared diagnostics for cancer and other diseases
- Generated \$60MM in ARR through foundation model products and drug development services for drug response prediction, biomarker discovery, and physician augmentation
- Positioned company for IPO by reorganizing division into 11 cross-functional teams and implementing a new company-wide ML product development lifecycle, sharply increasing productivity and collaboration
- Matured technical, people, and hiring operations, introducing parallel IC and managerial career ladders, development tracks for tech leads and new managers, automated ML CI/CD, and organizational OKRs

Kensho Technologies · New York, NY · 2018—2022

GM, AI & Natural Language Processing

- Scaled organization from 3 to 65+ across engineering, AI research,, ML Ops, product, and sales divisions
- Built \$200MM+ portfolio of LLM products deployed to 30B+ documents and 100k+ users

Machine Learning Technical Lead

- Led technical effort as principal ML scientist, publishing and patenting novel techniques in LLMs, weakly supervised deep learning, synthetic data generation, and knowledge base-augmented foundation models
- Architected petabyte-scale AI production platform to train, test, and deploy thousands of models per day

Zerobase Foundation · New York, NY · 2020—2021

CEO & Founder

- Founded and led 150-employee public health technology nonprofit providing a free, anonymous, accessible contact tracing platform to help over 100k individuals avoid Covid-19 in low-resource communities
- Developed breakthrough contact tracing algorithms with Harvard, Max Planck, and Amazon researchers

Harvard University · Cambridge, MA · 2018—2020

Associated Researcher, Department of Computer Science

- Directed research as visiting ML scientist on teams investigating misinformation propagation, fake news, NLP, and Visual Question Answering. Work appears in top ML publications, such as WWW and KDD

MarketFactory · New York, NY · 2015—2018

Product Engineering Manager

- Built and led R&D team of 10 for document and market data analysis at foreign exchange fintech company
- Architected 1.2PB database migration, resulting in a 100x speedup, >95% compression, and zero downtime

/ Education

Harvard University · Cambridge, MA

Applied Mathematics, Computer Science and Economics. *Highest Honors, Phi Beta Kappa.*

- Completed coursework for B.A. and graduate degrees concurrently
- Fay Prize for Most Outstanding Work at Harvard in Any Field, Hoopes Prize for Outstanding Dissertation
- Graduate research in deep learning, NLP, computer vision, misinformation detection, and graph ML

/ Technologies

- **ML:** Pytorch, TensorFlow/Keras, GPT/BERT/LLMs, LightGBM | Pandas, NumPy | NetworkX
- **Software:** Python (expert), C++/C, Java | Docker, Kubernetes, AWS | SQL, Elasticsearch | Kafka, Airflow

/ Selected Research and Publications

- Weijer, R., **Szanto A.**, et al. Medication Effects on Bradykinesia and Tremor in Parkinson's Disease, Measured by Wearable Sensors. International Parkinson and Movement Disorder Society (Forthcoming).
- Rosenfeld, N.*, **Szanto, A.***, & Parkes, D. A Kernel of Truth: Determining Rumor Veracity on Twitter by Diffusion Pattern Alone. *Proceedings of The Web Conference (WWW)*.
- Lorch, L., Kremer, H., Trouleau, W., Tsirtsis, S., **Szanto, A.**, Schölkopf, B., & Gomez-Rodriguez, M. Quantifying the Effects of Contact Tracing, Testing, and Containment Measures in the Presence of Infection Hotspots. ACM Transactions On Spatial Algorithms Systems.
- **Szanto, A.** Concept Modeling System. United States Patent TBD (Publication Forthcoming). United States Patent and Trademark Office.
- **Szanto, A.**, et al. Named Entity Recognition and Disambiguation Engine. United States Patent 16512652. United States Patent and Trademark Office.
- **Szanto, Aron**, et al. Dynamically Updated Text Classifier. United States Patent 20200286002. United States Patent and Trademark Office.
- Grand, G.*, **Szanto, A.***, Kim, Y., & Rush, A.. On the Flip Side: Identifying Counterexamples in Visual Question Answering. *KDD*.
- **Szanto, A.**, Tamm, T., & Pagnoni, A. Taint Tracking for WebAssembly.
- **Szanto, A.**, & Mehta, N. A Host of Troubles: Re-Identifying Airbnb Hosts Using Public Data. *Journal of Technology Science*.
- **Szanto, A.** The Skiplist-Based LSM Tree: A Novel High-Performance NoSQL Database.
- **Szanto, A.** & Gehrmann, S. Deep Learning Models for Large-Scale Collaboration.
- **Szanto, A.** & Boucher, N. ProtoN: A Fast Binary Protocol for JSON-like Data Transfer.

/ Publications and Press -----

- **Kensho NERD** Product Launch [Press Release](#). PRWeb.
- **Szanto, A. & Harris, D.** [Zerobase creates private, secure, and automated contact tracing using Amazon Neptune](#). Amazon Web Services Blog.
- **Radio Interview** with Les Sinclair on WINA regarding Zerobase contact tracing platform.
- **Max Planck Institute.** [International team of scientists develops machine learning model that could help inform COVID-19 containment measures](#).
- **The New Stack.** [Why Covid-19 Contact Tracing Requires a Distributed Database](#).
- [How These Software Engineers Make Clean Code a Priority](#). BuiltIn NYC.
- **Szanto, A., Mehta, N., & Houlihan, E.** [How to Rob an Airbnb](#). Syndicated on HackerNoon, Reached #1 on Y Combinator and Reddit.

/ Prizes and Awards -----

- **Innovation and Excellence Award, S&P Global.** *Recognizing superlative technological innovation.*
- **Invited Speaker, The Web Conference.** *Gave keynote lecture about ML research on fake news detection*
- **Fay Prize, Harvard University.** *The prize is given to the student who has produced the most outstanding imaginative work or piece of original research in any field.*
- **Hoopes Prize, Harvard University.** *The Thomas Temple Hoopes Prize is the most prestigious award an undergraduate may receive on the merits of their senior thesis.*
- **Blumberg Prize for Creative Applications of Science, Harvard University.**
- **Highest Honors, Harvard University.** *Recognizing top academic performance among peers.*
- **Phi Beta Kappa, Harvard University.**
- **Special Distinction Award. National Forensics Association.** *For excellence in individual debating.*

/ Music (Cello)

- World Youth Symphony Orchestra
- World Peace Orchestra
- Winner, Lincoln Center National Chamber Music Competition
- U.S. All-National, All-Eastern Orchestras
- Principal Cello, New York Youth Symphony
- New York All State Orchestra
- Principal Cello, Park Avenue Chamber Symphony
- [Solo Performance Excerpts](#)