

Matthew M. Landers

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EXPERIENCE

Software Engineer

Stride Consulting

New York, NY 2017 – 2019

Client: Schonfeld Strategic Advisors | Hedge Fund

- Built stateless Python services and stateful Java services to efficiently process billions of dollars in daily trades
- Improved system latency from 1.1 seconds to 15 milliseconds and reduced system recovery time from 2 hours to less than 5 minutes by changing data transfer method from HTTP to Kafka

Client: Magnetic | Advertising Management Platform

- Rebuilt core platform growing monthly recurring revenue from \$1,000,000 to \$6,000,000
- Engineered Python microservices that allowed users to manage each component of an online advertisement including audience definition, budget selection, and media creation
- Built microservices that published advertisements to 7 different networks

Client: 2U | Online Learning Management Platform

- Engineered a translation layer to facilitate communication between new backend services and a decade-old system
- Led development of a group grading feature that required complex logic to appropriately calculate student scores
- Designed an approach to store user-uploaded documents to Amazon S3 buckets in such a way that allowed a proprietary PDF editing tool to access the documents

Course Assistant

Johns Hopkins University

Baltimore, MD 2018 – 2019

- Explained challenging quantitative and conceptual topics to 20 students per semester in a graduate-level course
- Evaluated problem sets and labs to assess student comprehension and provided feedback to address errors

Software Engineer

Human API

San Francisco, CA 2016 – 2017

- Worked with data science and product teams to build integration solutions for 40+ customers
- Engineered custom products for 30+ clients including a user health timeline for Samsung
- Devised a partnership plan with executives from Merck Germany

Co-founder & CEO

Stonecrysus

Edgewater, NJ 2013 – 2016

- Developed a machine learning health platform that earned 4 United States patents
- Worked with an electrical engineering and design firm in Taiwan to manufacture a proprietary fitness wearable
- Presented 3 times to groups of 300+ people, including CES
- Negotiated with organizations such as Samsung, Amazon, and the US Olympic Committee
- Designed and built a web platform that allowed health practitioners to access and analyze patient data

Co-founder & President

Synduit

Englewood, NJ 2012 – 2013

- Grew monthly recurring revenue from \$0 to \$100,000+ in less than 1 year with a team of 2 people
- Drove profit margin to 80% by overseeing the construction of a machine learning-based automation platform
- Managed 12 employee team while building client base to 120+ businesses

RESEARCH

A Novel Metric for Cardiovascular Health

2019 – Present (*paused due to COVID-19*)

- Received \$60,000 in funding from a major hospital in NJ to work with 20 participants over a 90 day period
- Compared our machine learning-based assessment of fitness to the most widely used in-clinic measure of cardiovascular fitness

Gaps in Accelerating Digital Endpoint Development and Adoption

2020 (*Under review for publication*)

- Wrote a perspective that defined the gaps in the development and adoption of the digital endpoints used to assess the efficacy of drug therapies
- Co-authored with Dr. Suchi Saria (Johns Hopkins University) and Ray Dorsey, MD (University of Rochester)

Mitigating Bias in Classifiers with a Multi-Objective Genetic Algorithm

2020

- Framed the management of the bias/accuracy dichotomy as a multi-objective optimization problem
- Used a multi-objective genetic algorithm to find feature subsets that produced Pareto-approximate solutions for the accuracy and fairness objectives
- Designed the approach to generate a set of optimal results thereby allowing users to select the solution with a bias/accuracy balance most appropriate for their applications
- Achieved fairer and more accurate results than 4 state-of-the-art bias mitigation methods for multiple notions of bias on 4 popular real-world datasets

EDUCATION

Johns Hopkins University, Master of Science in Computer Science · 2021 (expected) · 3.94 GPA

Indiana University, Kelley School of Business, Bachelor of Science in Business · 2012

PATENTS

us 9,317,815, Health and fitness management system · Issued 4/19/2016

us 9,183,498, Health and fitness management system · Issued 11/10/2015

us 8,892,481, Health and fitness management system · Issued 11/18/2014

us 8,600,928, Health and fitness management system · Issued 12/3/2013

LANGUAGES & TECHNOLOGIES

Languages: Python, Java, JavaScript, R, SQL

Tools/Frameworks: MySQL, Scikit-learn, NumPy, Pandas, LaTeX, Docker, AWS