NOAH APTEKER, EIT

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EDUCATION

Columbia University — Columbia Engineering & Graduate School of Arts and Sciences *New York, NY*
MS in Data Science *September 2026 – December 2027*

- **Relevant Coursework:** Algorithms for Data Science, Probability & Statistics for Data Science, Exploratory Data Analysis & Visualization, Finance and Structuring for Data Science, Data-Driven Models in Finance

Drexel University — College of Engineering *Philadelphia, PA*
BS in Electrical Engineering · GPA: 3.73/4.0, Magna Cum Laude *September 2020 – June 2024*

- **Relevant Coursework:** Signals & Systems, Probability for Engineers, Complex and Vector Analysis, Machine Learning Practicum, Intro to Programming

RESEARCH & PROJECTS

Movement Recovery Laboratory, Columbia University — Research (Academic Credit) *New York, NY*
Bayesian Modeling of Non-Sigmoidal Neural Recruitment Curves *September 2026 – Present*

- Extract motor-evoked potentials (MEPs) from stimulation data and quantify their size using the lab's Python pipelines
- Build hierarchical Bayesian recruitment-curve models in the lab's hbMEP framework; planned work on novel curve functions, parameter uncertainty, and predictive model evaluation

Data-Driven Models in Finance (IEOR 4576) — Team of 3 (in progress) *New York, NY*
Replicating X-Trend: Few-Shot Learning for Trend-Following Under Regime Change *September 2026 – December 2026*

- Replicating a cross-attentive deep learning model (LSTM + multi-head attention, Sharpe-ratio loss) that conditions on past market regimes identified by Gaussian-process change-point detection
- Building the pipeline on 50 liquid futures from WRDS (1990–2026) and extending the out-of-sample test to 2024–2026; benchmarking Sharpe ratio and drawdowns against long-only, TSMOM, MACD, and a context-free neural baseline

PROFESSIONAL EXPERIENCE

Burns Engineering Inc. — Electrical Design Engineer *Philadelphia, PA*
Power, lighting, and electrical safety design for ports, transit agencies, highways, and universities *June 2024 – August 2026*

- **Port of Oakland Green Power Microgrid (with Moffatt & Nichol):** sized and modeled a 1 MW solar, 6.5 MW battery storage, and EV fast-charging system, designed Burns' 30-charger share, and coordinated 30/60/90% design reviews; scope later narrowed to a $52M, 115-charger EV package bid in Dec 2025
- **NJ Transit Arc Flash Study (River Line):** collected field equipment data on site visits, built and validated the system model in SKM, and authored the engineering report for a 200+ facility statewide safety program
- **PA Turnpike Wilkes-Barre Interchange:** redesigned placement of ~50 roadway light fixtures after toll plaza removal for Open Road Tolling, verifying light levels in AGI32
- **Clemson University Ductbank Relocation:** oversaw the design package for a medium-voltage ductbank relocation, drawing single-line diagrams and site plans in AutoCAD and compiling electrical specifications
- **Cordia Power Study:** cleaned and validated three years of utility billing data, flagging errors and anomalous usage, and built usage trends and forecasts supporting cost-reduction recommendations

EZSoft Inc. — Automation Engineer Co-op *Malvern, PA*
Design and Engineering Analysis *April 2023 – September 2023*

- Designed and modeled electrical control panels in Fusion 360, supported panel wiring, sourced hardware to specification, and verified installations against designs on site visits

LEADERSHIP

Tau Kappa Epsilon, Drexel University — Founding Vice President, President, Recruitment Chair *Philadelphia, PA*
Refounded the chapter after a five-year absence from campus *Winter 2022 – June 2024*

- Grew the chapter from 2 to 41 members, clearing the 40-member threshold to earn an official charter; served as President from Summer 2023 to Winter 2024
- Raised $2,000 for St. Jude Children's Research Hospital and hosted a meet-and-greet with Philadelphia Eagles defensive end Brandon Graham

SKILLS, CERTIFICATIONS & INTERESTS

- **Programming & Data:** Python, R, SQL, MATLAB, C, Excel (VBA)
- **Engineering Software:** AutoCAD, Revit, SKM, AGI32, EasyPower, ETAP
- **Certifications:** Engineer-in-Training (EIT), NCEES FE Exam; Data Science: R Basics, Harvard University *Sep 2024; Jun 2026*
- **Competitive Bridge:** Represented South Africa at the 2024 World Bridge Games and 2025 WBF World Championships; youngest-ever South African National Teams champion (age 16); shortlisted for IBPA Junior Deal of the Year (2017)
- **Interests:** Soccer, running, pickleball, trivia (JetPunk, Sporcle), chess