

Daniel Newman

Miami / Fort Lauderdale Area

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Education

Harvard University

Master of Science (S.M.), Computational Science and Engineering

Cambridge, MA
2014

University of Michigan

Bachelor of Science in Engineering (B.S.E.), Industrial and Operations Engineering

Ann Arbor, MI
2010

- Graduated *summa cum laude*
- Accenture Scholarship recipient for academic and extracurricular achievement

Work Experience

Revision History (acquired)

Founder

Fort Lauderdale, FL
Sept 2023 - March 2025

Revision History is a browser extension used by teachers to detect AI usage

- Grew the extension to 200k+ weekly users with no paid marketing
- Reverse engineers the Google Docs API to provide detailed information + video replay of drafting process
- Built with React/Typescript/Node.js and Supabase

Oiler

Founder

Fort Lauderdale, FL
July 2023 - Present

Oiler builds software for educators and school administrators + consulting work for startups

- Built ClassPlacer [🔗](#) to help elementary school do class placements
 - Uses stochastic optimization and mixed integer linear programming (Pulp in Python) to handle constraints like gender balance, student separation, class size, and friend requests
 - Includes an administrator-facing UI to update inputs and modify placements
 - Developed the algorithm for a Harvard AI course final project, earning a perfect score
- Building TaskNode [🔗](#), an open-source tool for running long-running scripts in the cloud (Python/Node.js/Next.js)
- Consulted for a legal-tech startup, building an LLM/AI-based model for social security claims analysis (Python)
- Built a hybrid semantic search engine + RAG for a startup developing tools for product managers (Python/React)
- Developed desktop software for a startup helping hedge funds transition out of Excel-based processes (C#/Scala)
- Optimized distributed computing infrastructure and logging for a startup building LLMs for local networks (Python)

IPD Analytics

Engineering Team Lead

Senior Software Engineer

Miami, FL
May 2019 - July 2023
July 2018 - May 2019

IPD is a major data provider to manufacturers, insurance companies, wholesalers and investors in the pharma industry

- Managed a team of engineers using Agile development practices
- Oversaw end-to-end implementation of large, customer facing projects, including:
 - DataStack: An analytics platform pulling data from IPD's major products and data sources
 - ★ *Backend*: Python, FastAPI, PostgreSQL, ElasticSearch, AWS Lambda, GraphQL
 - ★ *Frontend*: React, TypeScript
 - Rebate Monitor - A product for organizing and displaying price transparency data for the pharma industry
 - ★ *Backend*: Python, Flask, PostgreSQL, AWS Lambda
 - ★ *Frontend*: React, TypeScript
 - Forecasting - Backend + admin portion of forecasting tool for financial outlooks of pharmaceutical products
 - ★ Python, Flask, PostgreSQL, AWS Lambda, AngularJS, C#, MVC
- Handled recruiting and interview pipeline for the entire engineering organization; grew team from 8 to 25 engineers
- Pioneered GPT-3.5/4 integration, giving us the ability to extract data from international court decisions
- Worked closely with product owners and other business stakeholders to implement software specifications
- Developed, tested and handled deployment for legacy software products (C#/AngularJS/MVC)
- Deployed to and maintained AWS cloud infrastructure, with most services deployed via EC2, ECS or API Gateway/Lambda using PostgreSQL, SQL Server, Redis, ElasticSearch/OpenSearch and/or DynamoDB data stores

BookXchange

Senior Software Engineer

BookXchange is a wholesaler of college textbooks

Fort Lauderdale, FL

March 2017 - July 2018

- Managed all aspects of technology across company
- Developed software to facilitate fulfillment, sales and inventory management (Python/Django/vue.js)
- Designed processes to improve supply chain management, including a new online vendor portal
- Automated workflow for matching up supply and demand to auto-generate suggested orders (Python)
- Engineered scalable data-warehouses, enabling real-time analytics and improved business intelligence
- Oversaw process of selecting vendors and implementation partners for a new company-wide ERP system

Kyruus

Senior Software Engineer, Data Team

Software Engineer, Data Team

Kyruus develops enterprise software used by large hospital systems

Boston, MA

Dec 2016 - March 2017

July 2014 - Dec 2016

- Developed applications to integrate with external tools and APIs, including clients' electronic healthcare records (EHR) systems
- Created frontend (JS/jQuery/HTML/CSS) and backend (Python/Flask) for appointment scheduling tool
- Designed tools for classifying and organizing health data as well as APIs to retrieve curated data (Python/Flask/Jinja2)
- Created new testing framework to speed up development of provider schedule management system (Python)
- Built frameworks for front-end testing using PhantomJS and Selenium
- Assessed data quality using tools such as iPython, Numpy, Matplotlib and Pandas

E. Gluck Corporation

Software Developer

E. Gluck is a large-scale manufacturer of watches and other accessories

New York, NY

2012-2013

- Wrote custom software to improve business processes for the sales team
- Redesigned processes to reduce turnaround time and improve inventory visibility for small accounts
- Created and managed tool for automated generation of product line-sheets (VBA/VB.NET)
- Automated weekly sales data reporting using scripts written in Python, VBA and VB.NET

J.P. Morgan

Investment Banking Analyst

J.P. Morgan's Debt Capital Markets (DCM) group is a market leader in structured finance

New York, NY

2010 - 2012

- Helped structure Asset Backed Security (ABS) offerings and assisted in the bank's advisory business
- Oversaw collateral preparation for \$40M-\$300M ABS offerings
- Interacted with clients, rating agencies, accountants, and attorneys to prepare deal offering documents
- Developed tools in Excel/VBA to automate aspects of collateral preparation

Publications

JOURNAL ARTICLES

Optimizing the Assignment of Students to Classes in an Elementary School

Binyamin Krauss, Jon Lee, Daniel Newman

INFORMS Transactions on Education 14.1 (Sept. 2013) pp. 39–44. 2013

URL: <https://doi.org/10.1287/ited.2013.0111>

Skills

Languages	Python, Node.js/JavaScript/TypeScript, C#, C/C++, VBA, SQL
Web Development	Flask, Django, FastAPI, React, NextJS, HTML/CSS, JQuery, AngularJs, Redux, Bootstrap, MUI, ShadCN
Databases	PostgreSQL, SQL Server, ElasticSearch/OpenSearch, Redis, DynamoDB, Pinecone, Supabase, GraphQL
Parallelism	MapReduce/Hadoop (MRJOB), MPI, CUDA
Data Analysis	Jupyter, Numpy/Scipy, Pandas, Matplotlib, Excel (advanced)
Artificial Intelligence	OpenAI API, LangChain, LlamaIndex, Semantic Search, RAG, Local LLMs, PyTorch, MLX, CoreML
Other	AWS, Docker, Heroku, Git, Linear Programming, Stochastic Optimization, Chrome Extensions