Tom Yedwab

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SUMMARY

Experienced leader in software development and data science who excels at building, mentoring, and leading agile, effective teams. Passionate about diving deep into AI/ML projects with societal impact, leveraging my extensive background in data engineering, machine learning, and large-scale system architecture to drive innovation and positive change.

20+ years	Software development
9 years	Engineering leadership
8 years	Data science

Skills: Python, Go, Java, C, Javascript, SQL, R. ⋄ Google Cloud Platform (AppEngine, Cloud Run, GKE), AWS ⋄ Data science: visualization, governance ⋄ Machine learning: NLP, Deep Learning, PyTorch, LLMs ⋄ Leadership, management, mentorship, hiring, team building

WORK EXPERIENCE

Khan Academy

SENIOR ARCHITECT, DATA
Jan 2020 - Present

Recent projects: Design & implementation for evaluation framework for *Khanmigo*, a **GPT-4**-based AI tutor ⋄ Analytics instrumentation for March 2023 launch ⋄ Production tracing using **LangFuse** ⋄ Research on **LLM training & inference** using **PyTorch**, **LangChain** and **Weights and Biases**, and **graph RAG** methods using **neo4j** to ground LLMs with content and user knowledge.

Hired & led Data Infrastructure team of 8 engineers ⋄ Architected & shipped eventing system scaling to 200M+ events/day in **Go** using **Google Cloud AppEngine**, **Pub/Sub**, **Dataflow** and **BigQuery** ⋄ Deployed & managed **Airflow** on **GKE** for pipeline orchestration ⋄ Created technical roadmap for **A/B testing** using **GrowthBook** ⋄ Worked closely with Engineering Management, Data Governance Panel, Data Insights Group & senior leadership to advance critical projects ⋄ Steered & approved technical decisions across data platform overseeing instrumentation, ETL, disaster recovery, & self-service dashboards.

Khan Academy

ENGINEERING MANAGER
Jan 2015 - Jan 2020

Hired & managed Content Platform team of 9 engineers ⋄ Developed team members from interns to staff engineers through mentorship, regular feedback and active career development ⋄ Architected & shipped localized course management system using **React.js**, **Python** and **Kotlin** ⋄ Stabilized & scaled translations backend using **Crowdin** to support 70+ languages and millions of strings ⋄ Delivered product roadmap ⋄ Recruited for & managed summer internship/fellowship programs.

DATA SCIENTIST & ENGINEER
Jun 2012 - Jan 2015

Shipped multiple **A/B tests** to optimize an ML-based personalized learning platform ⋄ Analyzed product data using **Google BigQuery**, **Hive**, **Hadoop**, **R**, & **Python** ⋄ Refactored ML-based recommendations system for performance & stability.

SOFTWARE ENGINEER
Oct 2011 - Jun 2012

Designed, built, and maintained the Khan Academy content management system in **Python**, **jQuery** and **Backbone.js**.

Cryptic Studios

PROGRAMMER
Sep 2006 - Oct 2011

Prototyped and implemented game engine support for user-generated playable levels (called "The Foundry") in **C** for "Star Trek Online" (2010) and "Neverwinter" (2013) ⋄ Invented and built a procedural generation system used to populate maps and generate thousands of unique missions in "Star Trek Online" ⋄ Developed 3D world editor tools for "Champions Online" (2009).

WORK EXPERIENCE (CONT.)

Linden Lab

SOFTWARE DEVELOPER

Apr 2005 - Sep 2006

Drove multiple projects to improve the capabilities and render performance of **OpenGL** graphics engine in **C** for "Second Life", including interactive soft-body physics, realistic lighting and sky simulation. ◇ Redesigned the World Map system with automating batch rendering.

Blue Shift

GRAPHICS PROGRAMMER

2004

Developed 3D graphics engine features in **C** and Playstation 2 assembly for several credited games.

Berkeley Scientific Journal

BUSINESS MANAGER & ILLUSTRATOR

2001 - 2002

Managed business operations, contributed articles and designed cover illustrations for the journal.

Xdrive

JAVA PROGRAMMER (INTERN)

1999

Improved administrative tools for web-based file storage service.

EDUCATION

University of California, Berkeley

MASTER OF INFORMATION AND DATA SCIENCE

Completed 2016

Comprehensive two-year professional degree in the School of Information ◇ Included coursework in statistics, field experiments, **machine learning**, **NLP**, data engineering using **Spark**, data visualization using **D3** and data ethics.

University of California, Berkeley

BACHELOR OF SCIENCE, MATHEMATICS & COGNITIVE SCIENCE

Completed 2004

Double-major from the College of Letters and Science ◇ Special topics included **AI/ML**, linguistics, and psychology.