Erich Owens

Architect & Tool Builder Who Makes Complex Systems Legible

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PROFESSIONAL SUMMARY

I build systems that last and tools that explain them. Most engineers choose: go deep technically or go broad into management. I oscillate based on what the problem needs. Most ML engineers throw models over the wall. I build the visualization and tooling stack that brings humans into the loop—so others can understand the problem and see how the solution works. Mathematical and creative problem solver open to Senior IC or Leadership roles building transformative AI products at startups or big tech.

CORE SKILLS

LLMs • Agentic AI Design • Python • Machine Learning • Natural Language Processing • Computer Vision • System Design • Ranking Systems • Recommendation Systems • VR/AR Development • 3D Graphics • Spatial Computing • Avatar Systems • C++ • PyTorch • TensorFlow • TypeScript/JavaScript • Face Tracking • Unity • C#

WORK EXPERIENCE

CTO
Sep 2025 - Present

DOLPHIN AI

→Modernizing drone vision software for customer and insurer property understanding and protection needs
→Building AI/CV systems for geospatial intelligence, roof damage assessment, and property analytics

Engineering Manager > TLM > Staff Software Engineer
Aug 2023 - Sep 2025

Facebook AI Editing

META

→Managed mobile and ML engineers integrating computer vision and LLMs into composer and creation tools
→Led research and development for photo understanding, event detection, and collage creation
→Shipped AI-powered editing features to billions of users across Facebook mobile apps

Engineering Manager
Jun 2022 - Jul 2023

Avatars Craft

META

→Led avatar customization, asset pipeline, and ML integration
→Managed 40+ engineers across the org including engineering managers
→Built tooling to let artists and PMs understand ML decisions
→Scaled avatar systems across Meta's VR ecosystem
→Shipped ML-powered generation with human-in-the-loop visualization tools

Staff Engineer > TLM > Engineering Manager
XR Tech

META

Jun 2020 - Jun 2022

→Built computer vision and ML for Facebook face tech including mobile AR face tracker, FACS expression tracking, and audio-based lipsync
→Shipped production face tracking to Instagram AR effects used by millions daily

Staff Engineer
Instagram AR

META

Aug 2019 - May 2020

→Led effect curation and personalized ranking
→Hired art curators
→Built tools for surfacing avant-garde Spark effects
→Improved discovery of high-quality AR effects, increasing engagement and creator retention

Engineering Manager
FAIR (Facebook AI Research)

META

Nov 2018 - Aug 2019

→Managed AI engineers on embodied agents, MRI compressed sensing, AlphaZero open-source
→Contributed to fastMRI website/dataset release and competition kick-off
→Supported open-source AI research including fastMRI dataset release with NYU Langone

Founding Engineer
Facebook Spaces & Social VR

META

Dec 2016 - Nov 2018

→Built 'avatar from photo' system in 2 months for Facebook's first social VR app
→Hired ex-Pixar talent for parametric avatars
→Shipped company's best-reviewed avatars (FastCompany coverage)
→Launched Facebook Spaces to public

Engineer
Building 8 (Hackamonth)

META

Nov 2016 - Nov 2016

→LIDAR-based social VR room scans
→Thermal haptics research
→Peltier-cooled VR controllers
→Demonstrated novel haptic feedback modality
→Filed patent on thermal haptics

Computer Vision Software Engineer
Oculus Vision

META (OCULUS)

Jan 2016 - Oct 2016

→Built VR simulations for VR designers pre-hand-controller launch
→Used VR to design VR experiences, accelerating product development cycles

Tech Lead
Comment Ranking
META (FACEBOOK)

Jan 2015 - Dec 2015

- →Overhauled comment ranking for quality and civility
- →Semantic similarity, Thompson sampling
- →Co-authored PNLambda config language
- →Authored Commentology tool
- →Commentology tool still used company-wide a decade later
- →Significantly improved comment quality

Software Engineer
News Feed Ranking
META (FACEBOOK)

Jun 2013 - Dec 2014

- →Built first CV-based filter for Facebook news feed (hackathon win/patent)
- →Created JS visualization + Presto SQL tooling for experimentation
- →Pioneered computer vision in newsfeed ranking
- →Filed patent
- →Improved user experience

ML Engineer (First Hire)
NEWSLE

May 2012 - May 2013

- →Entity disambiguation, industry/subject prediction, news clustering, recommendation system
- →Linked 500k users by semantic content
- →Enabled personalized news discovery

Quantitative Analyst > Software Engineer
QUID

Sep 2011 - May 2012

- →Network visualizations of company interrelationships, text mining, unsupervised learning for cluster analysis
- →Built visualization tools for understanding company ecosystems

Adjunct Instructor
RHODE ISLAND COLLEGE

Jun 2011 - Aug 2011

- →Taught AP Calculus to highly-motivated secondary students
- →Shared mathematical foundations with next generation

Researcher
PIERRE AND MARIE CURIE UNIVERSITY (PARIS VI)

Jun 2010

- →Stochastic and partial differential equations research
- →Contributed to mathematical research in probability theory

Space Grant Intern
NASA JPL

Jun 2008 - Aug 2008

- →Systems engineering on Project Constellation
- →Contributed to NASA's next-generation spacecraft program

Laboratory Intern
Jun 2006 - Aug 2006

SLAC NATIONAL ACCELERATOR LABORATORY

→X-ray crystallography of Nitinol (nickel-titanium shape memory alloy) under sustained strain

→Developed algorithmic inference of crystallographic patterns from powder diffraction data

→Published and presented paper on algorithmic inference of x-ray crystallographic patterns of Nitinol under sustained strain

EDUCATION

MS Applied Mathematics - Brown University 2011

BS Applied Mathematics - Columbia University 2009

Budapest Semesters in Mathematics - Budapest Semesters in Mathematics 2007

BA Mathematics & Physics - Albion College 2007

PATENTS

US 10,630,632 B2 — Systems and Methods for Ranking Comments, Erich James Owens (2020-04-21)

US 10,621,417 B2 — Systems and Methods for Generating Content, Erich James Owens (2020-04-14)

US 10,545,969 B2 — Ranking and Filtering Comments Based on Audience (2020-01-28)

US 10,419,383 B2 — Systems and Methods for Ranking Comments Based on Interaction-to-Impression Ratio, Erich James Owens (2019-09-17)

US 10,311,525 B1 — Content Quality Evaluation and Classification, Erich James Owens (2019-06-04)

US 10,290,190 B2 — Providing Temperature Sensation to a User Based on Content Presented to the User, Erich James Owens (2019-05-14)

US 10,216,803 B2 — Ranking and Filtering Comments Based on Author and Content (2019-02-26)

EP 3,438,791 A1 — Providing Temperature Sensation to a User Based on Content Presented to the User (2019-02-06)

US 10,152,544 B1 — Viral Content Propagation Analyzer in a Social Networking System (2018-12-11)

US 10,063,513 B2 — Determining Temporal Relevance of Newsfeed Stories, Erich James Owens (2018-08-28)

US 10,057,199 B2 — Ranking and Filtering Comments Based on Impression Calculations (2018-08-21)

US 2016/0328480 A1 — Systems and Methods for Tuning Content Provision Based on User Preference (2016-11-10)

AWARDS & RECOGNITION

★ GPT-3 and CLIP Avatar Generation from Description (Fourth Hackathon Win)

★ Thermal Haptics for VR Controllers (Third Hackathon Win)

★ Meme Development Tracking Across FB/IG (Second Hackathon Win)

★ First CV-Based Newsfeed Filter (First Hackathon Win)