Stanley M. Bileschi

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Education

Massachusetts Institute of Technology   09/2000—05/2006
Ph.D. Artificial Intelligence: Thesis : Hierarchical models for computer vision.
Advisor Tomaso Poggio

University at Buffalo   09/1996—05/2000
BS Computer Science & BS Electrical Engineering with 4.0 undergraduate GPA
National Science Foundation Fellow - 2000

Work Experience

Google   07/2012—current

Google DeepMind (Staff Software Engineer)   01/2025—current
- Lead: "Gemini Evaluation : Analysis Infrastructure"
    - Managed a group of distributed engineers (MTV, NY, LON) developing tooling to support quality and debugging evaluation tooling for Pre-Training, Post-Training, Agentic and Research efforts in Gemini
    - Results:
        - 20x faster evaluations, Dedicated tooling for comparing agent versions – diving from top-level numbers down to individual prompts & judgements
    - Skills: Managing Google-scale infrastructure while delivering products at research pace.

Google CoreML (Staff Software Engineer)   09/2016—12/2024
- Lead: "CoreML Evaluation Infrastructure"
    - Organized 14 reports including indirects, plus virtual teams in Google DeepMind and Cloud.
    - Goal: Standardize Google's infrastructure for authoring, executing, and analyzing LLM quality evals
    - Results:
        - Delivered common infrastructure abstractions supporting 100s of users across Gemini & Bard
        - Connected LLM evals to Google's common CI/CD system. Zero customer cost
    - Skills: Large language models; Prompting; System design; multi-VP coordination & negotiation
- Lead: "ML Train-time analytics infrastructure"
    - Goal: Dev velocity and engineering satisfaction for ML model developers
    - Results:
        - Elevated TensorBoard to top tool by satisfaction at Google, including TB.corp - 5k WAU at Google
        - 29M TensorBoard OSS downloads/month. Used at Meta, OpenAI, Twitter, HuggingFace
    - Skills: OSS/internal hybrid systems; ML workflow; Bureaucratic maneuvering
- Lead: "TensorFlow Usability"
    - Goal: Migrate Google from legacy `dist_belief` to new TensorFlow. Reduce TF dev costs
    - Results:
        - Turned down dist_belief. Migrated 16 major teams from dist_belief to TensorFlow - including several billion-user products in other PAs such as Ads, YouTube and Cloud.
        - "*This is great work, complex because of the large number of users and careful work required to migrate real production ML systems to a new ML platform*" – Jeff Dean, Google Chief Scientist
        - Improved error messaging for TensorFlow devs.
        - Delivery of TensorFlow JS.
    - Skills: ML Frameworks; Usability studies; Python; Rust; TypeScript & Redux
- Manager / Lead
    - Results: managed a group of teams totaling 14 ICs. Managed sub-managers
        - 95% favorable anonymous feedback
        - "*Stan has set up the structure of the team well. I like the process used to prioritize and assign projects. I also appreciate that Stan always attempts to get feedback on these processes in order*

- Managerial skills:
    - Culture-building; Coaching; Performance mgmt (both high and low); Motivation; Mentoring
- Leadership skills:
    - Vision; Milestones; Project funding and assignment; Founding, structuring & focusing teams

Google Play (Senior Software Engineer)   12/2013—09/2016
- Play Store Autocomplete
    - Goal: Simplify infrastructure merging **search** autocomplete across Apps, Books, Movies, Music
    - Results: Transformed a 60k QPS monolith into a modular search stack. Each sub-business now owns their own indexing, scoring, and presentation layer, allowing independent evolution.
    - Skills: **Search infrastructure**; Big Data; Multi-team negotiation
- Play Store Search & Discovery
    - Goal: Search and Discovery Revenue & Customer Engagement
    - Results:
        - Developed and launched "Similar Apps" and "Users also Installed".
        - +3% overall store revenue(now a $10B business)
    - Skills: Map-Reduce; Embedding; Collaborative filtering; C++

Google Flights (Software Engineer)   07/2012—12/2013
- QPX Hacker (Post ITA acquisition)
    - Results:
        - Migrated ITA from their SVN repo (100s of devs, 10+ yrs of code) to Google's common P4 repo.
        - Wrote '[lisp koans](#)'
    - Skills: Lisp; Python; Revision control system details

DataXu   09/2009—07/2012

ML Dev
- Goal: Ads trading strategies powered by ML models
- Results: Developed a strong competitor using ML for real-time ad auctions - company sold to Roku
- Skills: ML; Big data; Ad tech

Bileschi Intelligence Services LLC   05/2006—09/2009
Small business owner / ML application developer
- Developed ML applications for start ups & media companies
    - MLB.com : Video tagging
    - DataXu : Ad tech
    - Vistacon Technologies : Vision tech for retail
    - ScanScout.com: Video tagging technology
    - Affine Systems: Deployable face detection technology
- Developed ML applications for defense companies
    - BAE Systems : Object detection from satellite imagery
    - Raytheon : Anomaly detection
    - Lockheed : Road network analysis
- Skills: ML; Customer relationship building; Financing & Sales

Selected Publications
* denotes first author, ** denotes single author

Books
Deep Learning with JavaScript: Neural networks in TensorFlow.js, [Manning Publishing](#),   2020

Selected Conference Papers [[Full list on Google Scholar](#)]
**Fully automatic calibration of lidar and video streams from a vehicle. *[ICCV](#)*   2009

**Object detection at multiple scales improves accuracy. *ICPR*   2008
Perception strategies in hierarchical vision systems. *CVPR*   2006
* A Unified System For Object Detection, Texture Recognition, and Context Analysis Based on the Standard
Model Feature Set. *BMVC*   2005

Journal Articles
Robust object recognition with cortex-like mechanisms. *PAMI*   [Patent Awarded] 2007
A critical view of context. *IJCV*   2006

Thesis
StreetScenes: Towards scene understanding in still images. *MIT Ph.D. Thesis*   2006

Open Source
TensorBoard (6.7k★) [60 commits]   2019—current
TensorFlow.js (18.1k★) [40 commits]   2018—2019
Lisp Koans (3.1k★) [21 commits] [foundation]   2013