BRAD NEUBERG

Website:
codinginparadise.org

San Francisco

Summary

My research interests are machines that see, hear, and plan in order to augment people & society's capabilities. I am a machine learning software engineer, with a focus on deep learning.

I have a decade and a half experience as a software engineer across such companies as Google & Dropbox, startups, and the open source world. I am currently a Research Scientist at the SETI Institute and NASA's Frontier Development Lab, applying deep learning to space science and space exploration. Before the SETI Institute I was a Machine Learning Engineer at Dropbox, doing industrial R&D to ship deep learning-powered products to millions of users and across billions of files.

Earlier work includes having started Coworking, which grew into an international grassroots movement to establish a new kind of workspace for the self-employed, with more than 15,000 coworking spaces now open globally. At a startup named Inkling I founded Inkling Habitat, re-imagining interactive digital textbooks for higher education and how they are published by adopting ideas from computer science — Inkling Habitat turned into a multi-million dollar business that was adopted by the world's major educational publishers, such as Pearson & Elsevier. At Google I helped the web blossom into a true application deployment platform through efforts like HTML5. Finally, I worked with Douglas Engelbart, the inventor of the computer mouse & hypertext, on the National Science Foundation-funded HyperScope project to use advanced hypertext to support collaborative teams.

Experience

SETI Institute/NASA Frontier Development Lab — Research Scientist — 2019 - Present
Deep learning for deep-space heliophysics missions, including satellite auto-calibration using CNNs, virtual telescopes using image-to-image translation via U-Nets, learned scientific embeddings via GANs, and more.
Research on radiation-resistant software-tolerant deep neural networks for space applications.

Dropbox — Senior Machine Learning Engineer, Machine Learning Team — 2014 - 2018
Tech lead for industry leading computer vision deep learning system to automatically extract searchable information from billions of images (TensorFlow/PyTorch, CNNs,

bi-directional LSTMs, CTC loss, etc.)
Led R&D on intelligent assistants to make teams more productive, and intelligent file systems ("Siri for Organizations") for advanced multimedia search & auto-organization of files.

Inkling — Tech Lead — 2010 - 2014
Founding engineer for key startup product, Inkling Habitat, re-imagining interactive digital textbooks for higher education & how they are published. Product grew into a business worth millions and was adopted by all the major educational publishers' (Pearson, Elsevier, etc.) ebook pipelines.

Google — Software Engineer — 2007 - 2010
Helped grow the World Wide Web into a successful & robust application deployment platform via efforts like HTML5. Software engineer on Google Apps, pushing collaboration tools forward.

Selected other experiences:
Cloudless (collaboration with Planet Labs) — 2016 - Open source deep learning pipeline for orbital satellite data (AWS + TensorFlow + Selective Search + Region Proposal Networks for cloud detection).
Personal Photos Model — 2015 — Open source deep learning model for automatically organizing users' personal photos (AWS + TensorFlow + Siamese Networks).
Coworking — Inventor — 2005 - Present — Invented, started, & evangelized coworking, an international movement focused on collaborative workspaces. There are now ~15,000+ coworking spaces globally.
Douglas Engelbart — 2006 - 2007 — Worked with Douglas Engelbart, the inventor of the mouse, hypertext, and more, via National Science Foundation grant on using advanced hypertext to support collaborative teams.
Rojo — 2004 - 2006 — Engineered one of the first advanced, web-based "future of news" RSS aggregators.
Internet Archive — 2005 — Helped create one of the first large-scale web-based public online libraries, bringing millions of books to users in the browser.

Education
Columbia University - B.A., Computer Science

Skills
Deep Learning (CNNs, RNNs, network architectures, TensorFlow, PyTorch, etc.); Software Engineering (architecture, test-driven development, engineering leadership, etc.); Systems Engineering (Python, databases, Unix, AWS/GCP, distributed systems, etc.); General ML (Jupyter, data science, etc.); Web Engineering

(JavaScript, HTML, CSS, API development, web servers, etc.); Product Management & Innovation (user-driven development, futurist studies, etc.)