

RESUME OF J. DANIEL BRUMLEVE

jdb1729@gmail.com | 217-722-2642

SYNOPSIS

Software engineer with diverse domain experience including distributed systems, machine learning, information retrieval, security, cryptography, 3D graphics and generative art. Industry experience includes social media, music, advertising, education, manufacturing, publishing. Strong interest in mathematics and theoretical computer science. Seeking a challenging position in technology with a focus on innovation.

I am an expert programmer, fluent in Linux, C, C++, perl.

I am a published mathematician and author of two U.S. patents encompassing my innovations at Topsy and recent independent machine learning projects.

In 2020 I co-founded the Ford County Chronicle, a local print and online newspaper serving Ford County, Illinois, and a member of the Illinois Press Association. This year the Chronicle took home 38 awards at the Illinois Press Association Convention, more than any other Illinois newspaper, including the David B. Kramer Memorial Trophy.

In the 1990s and 2000s I discovered several widely-covered exploits in Netscape Navigator, MSIE, JavaScript and Java including Tracker, Cache Cow, and Brown Orifice.

In 1991 I founded Armageddon MUD. Armageddon is today one of the oldest continuously-operating MUDs on the internet.

EXPERIENCE

Apple (Nov 2013 - Aug 2017).

Leveraging Topsy's technology, created and maintained a system for real-time identification and ranking of news-related search terms for Apple's Spotlight Search product.

Topsy (Feb 2008 - Nov 2013).

Designed, built and maintained server-side software infrastructure for Topsy's Twitter search and analytics. Developed Sentiment and Related Terms product verticals.

Imeem (Apr 2008 - Oct 2008).

Designed and implemented an in-memory database as a caching layer in Imeem's .NET-based application server.

Snocap (Jul 2004 - Apr 2008).

Built and maintained server-side software to enable content identification and licensing. Snocap developed a pioneering P2P music distribution system and was one of the first authorized digital music platforms that used the MP3 format.

Cloudmark (Aug 2003 - Jun 2004).

Designed and implemented spam signature algorithms used in Cloudmark's anti-spam products.

APL Engineered Materials (Oct 2002 - Apr 2003).

Automated business processes for purchasing, invoicing, shipping, inventory control, time tracking. Designed combinatorial search algorithm for experimental production runs within inventory constraints.

Napster (2001 - 2002).

Maintained napd, the Napster server. Integrated SSL and DRM support.

Hewlett-Packard (1998 - 1999).

Developed e-commerce web applications for HP's intranet.

Wolfram Research (1995 - 1996).

Developed and maintained company web site. Developed The Integrator, a web site showcasing Mathematica's symbolic integration capability. Developed e-marketing application for tracking sales leads.

PATENTS

Audio-visual simulation-generating neural network system.

(U.S. Patent 11361563B2 – Issued June 14, 2022).

Embodiments of the present invention provide a system of interconnected neural networks capable audio-visual simulation generation by interpreting and processing a first image and, utilizing a given reference image or training set, modifying the first image such that the new image possesses parameters found within the reference image or training set. The images used and generated may include video. The system includes an autoposer, an automasker, an encoder, a generator, an improver, a discriminator, styler, and at least one training set of images or video. The system can also generate training sets for use within.

Systems and methods for discovery of related terms for social media content collection over social networks.

(U.S. Patent 20130304818A1 – Issued November 14, 2013).

A new approach is proposed that contemplates systems and methods to discover one or more terms related to one or more query terms submitted by a user for search over a social media network, wherein the related terms discovered are trending and co-occurring with the submitted query terms over the social media network during a specific period of time. The terms related to the submitted keywords can be discovered based on based on various measurements that measure the trending characteristics of the terms in the social media content items collected over a period of time. Once the terms related to the submitted keywords have been discovered, they can be utilized to search or perform aggregated metrics and analytics on the social network together with the user-submitted query terms for content items containing all or most of the query terms and/or the related terms, wherein such content items obtained are presented as the search result to the user or subject to aggregate metrics and analytics presented to the user.

PUBLICATIONS

The mate-in-n problem of infinite chess is decidable.

(CiE12: Proceedings of the 8th Turing Centenary Conference on Computability in Europe: how the world computes – June 2012).

Infinite chess is chess played on an infinite edgeless chessboard. The familiar chess pieces move about according to their usual chess rules, and each player strives to place the opposing king into checkmate. The mate-in-n problem of infinite chess is the problem of determining whether a designated player can force a win from a given finite position in at most n moves.