RESUME OF J. DANIEL BRUMLEVE

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Synopsis

Software engineer with over 25 years experience in a variety of business and technical domains including distributed systems, information retrieval, security, cryptography, machine learning, 3D graphics and generative art. Author of two U.S. patents, one covering my innovations at Topsy (2013) and another encompassing my machine learning projects at MakeMore (2022). Discoverer of several major web security bugs covered by WSJ, NYT, including the first cross-site-scripting (XSS) vulnerability. Inventor of open-source cryptocurrencies dBarter (2000) and BankOfEuler (2007), and finder of lost bitcoins. Creator of Armageddon MUD (1991), one of the oldest continuously-operating internet games. Member of the Illinois Press Association and co-founder of the Ford County Chronicle (2020), an award-winning regional newspaper. Published mathematician and top-ranked StackExchange and MathOverflow contributor. Practiced in Linux, C++, perl, python, JavaScript. Familiar with modern development methodologies and tools including Scrum, Agile, Continuous Integration/Development, git and git-based workflows, Jira, AWS, GCP. Adaptable and autodidactive, helpful and communicative, setting a high standard for innovation.

Experience

MakeMore Software (Jan 2020 - present) - Founder.
Boutique machine learning start-up focused on generative art, augmented reality and foundational research. (Linux, C++, CUDA, perl, python).

SEED Token (May 2018 - Sep 2018) - Software Engineer.
Consulting for blockchain firm focused on the AI chatbot space. Developed prototypes for several generative text concepts. (Linux, C++, perl, Ethereum).

Apple (Nov 2013 - Aug 2017) - Individual Contributor (Software Engineer).
Leveraging technology developed at Topsy, created and maintained a system for real-time identification and ranking of news-related search terms for Apple's Spotlight Search product. (Linux, C, C++, perl, python, go).

Topsy (Feb 2008 - Nov 2013) - Software Engineer.
Designed, built and maintained server-side software infrastructure for Topsy's Twitter search and analytics. Developed Sentiment, Related Terms, and Alerts product verticals. (Linux, C, C++, perl, python).

Imeem (Apr 2008 - Oct 2008) - Software Engineer.
Designed and implemented an in-memory database as a caching layer in Imeem's .NET-based application server. (Linux, Win64, C#, .NET platform, Mono).

Snocap (Jul 2004 - Apr 2008) - Software Engineer.
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. (Linux, C++, perl, python).

Cloudmark (Aug 2003 - Jun 2004) - Software Engineer.
Designed and implemented spam signature algorithms used in Cloudmark's anti-spam products. (Linux, C, C++, perl).

APL Engineered Materials (Oct 2002 - Apr 2003) - Software Engineer.
Automated business processes for purchasing, invoicing, shipping, inventory control, time tracking. Designed combinatorial search algorithm for experimental production runs within inventory constraints. (Win16, Win32, MSIE, C++, JavaScript, MS SQL Server).

Napster (2001 - 2002) - Software Engineer.
Maintained and developed napd, the Napster server. Integrated SSL and DRM support. (Linux, C, C++, perl).

Hewlett-Packard (1998 - 1999) - Software Engineer.
Developed e-commerce web applications for HP's intranet. (HP-UX, perl).

Wolfram Research (1995 - 1996) - Software Engineer.
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. (assorted Unix platforms, C, perl, Mathematica).

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.