

Shawn F. Murphy

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Profile:



Shawn Murphy is a visionary, innovative and goal-surpassing FOUNDER, CEO and CTO with 30+ years of successfully spearheading the execution of organization visions through bold and solutions-focused business strategies.

- **Software architect**, knowledge engineer, software **developer**, dev team leader, and trainer with vast experience designing and building large data-driven, scientific, academic, collaborative, e-commerce, visualization and publishing systems
- Highly proficient in diverse programming languages, knowledge representation technologies, frameworks, visualization tools, RDBMSes, ORMs, APIs, standards, methodologies and architectural styles
- Motivated by the observation that exponentiating technologies (A.I., computing, robotics, biosci) are dominating flatlining wisdom he has led research into solving the human-values alignment problem as a foundation for addressing AI alignment, democratic fragility, irreproducible science, fake news and other conundra
- A visionary leader striving to build out a global-scale knowledge management ecosystem wherein software, knowledge and presentation co-evolve under the pressure of human values and expertise – to technologically host and ground our collective cognition, so we can meet the challenges of our time

Professional Specialties:

Knowledge Representation & Graphs, Semantic Web, Distributed Systems, Collaborative Filtering, Agile, RDBMS, EDI, ORM, Functional, OOP, Cognitive Computing, Dynamic Graphics, DevOps, Pattern Languages, Data-Context-Interaction, Browser Extensions, Identity Management, NoSQL, DevOps, FOSS, Computer Supported Collaborative Work

Standards:

TMDM, OKBC, RETS, Digest Auth, RBAC, ANSI X12 EDI

Languages:

Python, Javascript, Coffeescript, Typescript, Postscript, SQL, Rust, Bash, Java, C, AWK, ObjC, Scheme, Smalltalk, LISP, Nim

Formats:

HTML5, CSS, SVG, XML, DocBook, SGML, Markdown, L^AT_EX, N3, TriG

Upper Ontologies:

RDF*, OWL, OKBC, TMAPi, CycL, WordNet, KQML, DAML

Systems:

Linux MacOS iOS Android Squeak Minix AS/400 OS/2 NeXTstep Windows AppleII

Industries:

Artificial Intelligence, Molecular Nanotechnology, Bioinformatics, Bibliographic Systems, Digital Humanities, B2B & B2C E-Commerce, Database Publishing, Real Estate, Recruiting Systems, Fleet Automation & Tracking, Supply Chain Automation, Laboratory Information Management, Learning Management

Experience

2015 to present Founder & CEO [Nooron Collaboratory Inc/UG](#)
Nooron is a long-term R&D project in pursuit of exponentiating collective human cognition. It consists of a novel semantic database backend and flexible frontend which includes knowledge management, data visualization and collective intelligence application development tools. Shawn leads this six person company and also serves as software architect and lead programmer. Nooron Inc is funded by angel investment; management services to consumer products vendors; and semantic software development services to Universities including Guelph, Alberta, Cambridge and Exeter.

2013 to 2014 Fullstack Software Engineer [Connectifier](#)
Used Java, Scala, AngularJS, the Play Framework, MongoDB, Elastic Search and Selenium as part of a startup team to build a category leading recruiting platform. Connectifier used big data and machine learning techniques to crawl the web and social networks for CV and contact information to empower recruiters specialized in hiring software engineering talent. Shawn was their sixth engineer following the four initial Google software engineers. Shawn left to found Nooron Collaboratory. Connectifier was later acquired by LinkedIn.

2013 to 2014 Architect & Programmer [The Orlando Project](#)
Coding and architecting an animated highly interactive semantic visualization research platform using D3, Canvas, RDF and NodeJS for a university consortium working in

the digital humanities. It features multi-modal interactivity (using direct manipulation; bulk specification and a novel semantic graph layout specification language) to support visual exploration of a large text corpus.

2011 to 2014

Founder, CTO, Architect

Semandra, Inc.

Semandra provided full-service front-to-backend website development specializing in graphics-intensive designs with multimedia integration, database-driven backends with complex programming requirements, and content-rich user-maintainable CMS sites.

- Ponderate — an agile, collective knowledge curation and evaluation tool
- TOBFleet — a RESTful web service which simplifies vehicle fleet integrations
- Theamatic — a web application for repertory theatre and film festival management.
- CReturns — a graphical scheduling system, e-commerce solution and Salesforce integration for this home energy auditing and retrofitting service

2002 to 2011

Principal

smurp.com

Smurp.com provided contract programming and consulting services with a focus on database-backed web sites and complex data processing operations.

- PyOKBC — A Python implementation of the *Open KnowledgeBase Connectivity* system of knowledge representation and abstraction. It was designed to provide a single consistent interface to diverse structured information sources, to include ontologies, relational databases, xml documents, and topic maps.
- PyRETS — An implementation of the *Real Estate Transaction System* for keeping the Vancouver Real Estate Board synchronized with MLS.ca
- CatPub — A database publishing technology consisting of a Postscript templating system over a relational database back-end. Suitable for automatically preparing complex, highly customized, Postscript and PDF publications such as directories and catalogs, it is closed source software created under contract for a firm providing publishing services to the real estate industry. It is producing on the order of 10 thousand unique catalog pages every day containing constantly changing data for the largest real estate boards in Western Canada.
- TKQ2.0 — A Django e-store system vending e-books for hundreds of educational publishers, through a dozen store-fronts, with sophisticated features such as promotions, steganographic watermarking in PDF, bundling, coupons and more.
- TKQW — A Medusa-based “digital drop-shipping“ system enabling digital goods sale and delivery by untrusted 3rd parties.
- ModelViz — Added dynamic SVG-based touring facilities to this Django model entity-relationship visualizer.
- Alberta Lodging Association — A Django-based lodgings database backing a web site, a printed directory and an associated advertising sales and layout system.

2002 to 2011

Principal

smurp.com

Shawn founded Emergence by Design along with four colleagues to pursue the development of *The Idea Engine*. To fund the ongoing development of TIE, EbD became a dot-com factory, providing consulting, development, hosting and ecommerce services to new dot-com ventures. Shawn was VP of R&D, lead developer and chief architect of this 15-person organization, until selling his interest in 2003.

- **TheIdeaEngine** — architect and lead developer of this R&D project developing a distributed knowledge representation system using Java (and JDBC), Perl (and DBI), Scheme, and various SQL backends. The effort included the implementation of the OKBC (Open Knowledge Base Connectivity) specification in Java and Perl, the authoring of a multithreaded knowledge server and the creation of many perl CGIs, Java Applets and Applications.
- **GetCited.org** — chief architect and lead developer on this massive, highly abstracted academic bibliographic portal system featuring:

- reference and citation cross-references
- per-publication discussion forums
- curriculum vitae management
- links with Amazon and other vendors for associate referral income
- seeded with MARC Book and Serials databases from Library of Congress
- rich array of publication types (proceedings, books, articles, manuscripts, bibliographies, etc)
- tracking of individual/institutional affiliations
- sophisticated statistics on publishing influence of nations, institutions and individuals based on citation counts
- [DedicatedTeacher.com](#) — architect and lead developer for this large, highly abstracted ecommerce engine featuring:
 - sells both 'digital-goods' (eg. MP3s and PDFs of books) and 'tangible goods' (printed books, CDs, educational kits)
 - complex shipping options
 - multiple suppliers per store
 - sophisticated coupon, bundle, sale and promotion features
 - serves store fronts for various companies (e.g. Scholastic)
 - supports multiple currencies, multiple credit-card transaction backends simultaneously and selectively (depending on currency, card-type, availability, etc.)
- [Law Opinion](#) — architect and developer of the worlds first E-Commerce facility for the provision of paid legal opinions. It included numerous encryption safeguards to ensure complete client confidentiality; a system for letting people pick the nearest lawyer with experience in the chosen area of the law; and a sophisticated, dynamic, system for performing branching automated interviews.
- [FindAMentor.com](#) — architect and lead developer of this system for helping people find and interact with mentors in various areas of their lives; complete with anonymization and multiple personal profiles in different areas of interest
- EmailDirector — architect and developer of this web-based school management system with parallel web and email interfaces and sophisticated email transaction system for, at that time, Canada's largest e-school with 2500 grade-school students
- EStore — architect and developer of this web interface for creating E-Commerce websites using NGage Electronic Commerce technology
- recruiter matchmaking system — salvaged, re-architected and built out a head-hunting firm's matchmaking system for staffing high-tech jobs based on skill, locality and position type
- ClickTrace — architect and developer of this web log mining facility
- Domainatrix — architect and developer of this toolset for bulk management of domain registrations, DNS configurations and network interface configuration
- Edmonton Chamber of Commerce Annual Directory — architect of this database-driven directory including ads and equivalents of white pages and yellow pages
- magazine publishing system — architect of this complete publishing solution with extensive features for advertising sales management and ad layout automation

