

EXECUTIVE SUMMARY

Seeking opportunities in data science and machine-learning, start-up management and venture capital.

- MBA and Entrepreneurship experience via co-founding various startups and providing advice to startups.
- Technical knowledge via publishing in top technical conferences – applied data science, databases, applied machine learning, human-computer interaction, accessibility, transportation.
- Software engineering management and technical project management experience via startups and leading several research project teams each year for many years.
- Technical product management from conception to deployment via launching two products, and two successful degree programs - in Data Science and in Product Management.
- Intellectual property commercialization experience via multiple university and research lab spin-outs.
- Data Science programming experience via consulting for a long-short fundamental equity hedge fund.

WORK EXPERIENCE

Consultant, Deep Basin Capital, 2017 – Present

Providing consulting services for long-short fundamental research hedge fund in the oil and gas industry.

- Provide advice on software engineering practices
- Design, implement, and evaluate machine-learning models
- Collaborate with analysts and technical team to design and implement models

Carnegie Mellon University, 2004 – 2018

Currently conducting research on:

- Machine-learning applied to database performance optimization,
- Intelligent user interaction via machine learning for mobile applications,
- Novel interactive children's books, and
- Deep neural networks for structured question answering systems.

Co-Founder for Master of Science in Product Management degree program. <https://ms-product-management.cmu.edu/> Product management degree program for software intensive industries.

Anthony S. Tomicic, PhD, MBA

6801 Trinity Landing Drive South, Fort Worth, TX, 76132

412-951-4558 • <mailto:anthony.tomicic@gmail.com> • <http://www.cs.cmu.edu/~tomicic>

- Co-founded unique joint degree between School of Computer Science (SCS) and Tepper School of Business (Tepper)
- Designed vision for the program including program learning outcomes
- Coordinated and performed market analysis of demand with potential employers
- Co-designed curriculum with business school faculty
- Analyzed various financial models to predict profitability
- Negotiated shared responsibilities between SCS and Tepper
- Evaluated student applications to the degree program

Teaching responsibilities include:

- Graduate level Seminar in Data Science: review of the machine learning literature, analysis of publications
- Graduate level Capstone Project Course: example projects of 2-7 person teams:
 - Machine-learning structured query generate from natural language
 - Machine-learning based hand-gesture recognition to control drones
 - Machine-learning analysis of text for financial prediction
 - Machine-learning prediction of transit bus arrival
 - Machine-learning recognition of toilet flushing sounds – a urology bladder diary application
 - Machine-learning classification of duplicate product descriptions
 - User activity modeling via mobile phone accelerometers and machine learning
- Graduate level Database Systems course: internal structure, indexing, distributed query processing, serializability theory, transaction processing, NoSQL, main-memory databases

Associate Director, New York City Campus, 2015 – 2016. Led the administrative and academic organization of the proposed new CMU campus in Brooklyn Navy Yard. Launch was cancelled due to insufficient funding.

Co-Founder and Director for Master of Computational Data Science degree program 2005 – 2013. <http://mcds.cs.cmu.edu> A professional master technical education degree related to data science and machine-learning.

- Created curriculum for new master degree program
- Negotiated degree authority with university administration, including financing, sales, marketing, and operations
- Launched degree program internationally
- Directed on-going operation of degree program for 10 years
- Currently teaching core courses of the degree program
- Current annual class size of ~75 students brings ~\$5.5 million in annual revenue
- Student placement near 100% with industry leading salaries
- Alumni now working at Google, Microsoft, Facebook, Amazon, etc.

Senior Systems Scientist for the Tiramisu Project 2010 – Present. The Tiramisu (“pick me up” in Italian) project is an intelligent assistant for transit riders that provides real-time instrumentation of a transit system based on crowd-sourced information. The

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smartphone app provides a user interface to bus riders on the location of buses, the current load of the bus. Users report the real-time location and load of buses during ride.

- Created and led team for all software design, development and deployment of the Tiramisu production system
- Negotiated transfer of Tiramisu intellectual property to Tiramisu Transit, LLC
- Designed human participant experiments to measure performance of Tiramisu
- Tiramisu was released to the public in July 2011 and is currently operational
- Tiramisu won several awards – see the awards section

Senior Systems Scientist for the RADAR project 2003 – 2008. This research project applied machine learning to create an intelligent user interface.

- Created, designed and lead team for an intelligent user interface based on natural language processing and machine-learning.
- Created, designed and lead team for an intelligent web macro-recorder prototype based on programming-by-example and machine-learning.
- Co-designed and led team of engineers and behavioral scientists in the execution of human-subject experiments that measured the performance of prototype

Tiramisu Transit, LLC, 2011 – 2018

Co-Founder and Managing Partner, CMU spinout of the Tiramisu Project.

<http://www.tiramisutransit.com>. Tiramisu has released a production version of a crowd-sourced transit information system.

- Shell company to hold intellectual property transfer from CMU
- Co-authored two SBIR grants to fund the company

E-XMLMedia, S.A. Pittsburgh, Pennsylvania & Paris, France, 2001 – 2002

Co-Founder, US CEO, and Director for an international independent software vendor and consulting company focused on data integration of very large XML middleware.

Company closed due to lack of demand for the product.

- Key individual in €4 million venture capital financing round
- Co-wrote E-XMLMedia U.S. and France business strategy documents
- Presented E-XMLMedia products to customers

Common Object, Inc., San Mateo, California, 2000 – 2001

Co-Founder and Chief Technology Officer for a next-generation electronic affiliate advertising company. The vision of Common Object was to provide “context sensitive” banner advertisements and transactions to WWW users.

- Lead team that constructed a distributed, highly scalable e-commerce system
- Co-wrote Common Object business plan

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- Conducted Common Object new business vertical market research
 - Managed all aspects of Common Object patent application process
 - Recruited and managed Common Object technical advisory board with members from Stanford University, University of California, and University of Maryland
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Digital Integrity, Inc. San Mateo, California, 1998 – 1999

Engineer for an Internet search engine that accepted entire documents as queries and searched the WWW for matching sentences – team developed a high performance WWW crawler.

**Institut National de Recherche en Informatique et en Automatique (INRIA)
Rocquencourt (Paris), France, 1995 – 1998**

Invited Researcher responsible for the team that designed, specified and implemented the DISCO federated distributed database system. This code base was sold to the French comparison-shopping site Kelkoo <http://www.kelkoo.com>. Kelkoo was purchased by Yahoo.com.

International Business Machines (IBM) Almaden Research Center 1994

Post-Doctoral Researcher on information retrieval systems and the federation of information retrieval search engines.

European Computer-Industry Research Centre, Munich, Germany, 1984 – 1989

Research Staff member research on deductive database theory and implementation of deductive database systems.

EDUCATION

2006 – 2009 MBA, Tepper School of Business, Carnegie Mellon University

- Concentrations: Finance, Organizational Behavior, Marketing

1992 – 1994 PhD, Computer Science, Princeton University

1989 – 1992 MA, Computer Science, Princeton University

1979 – 1983 Honors BS, Computer Science, Indiana University, Bloomington

AWARDS, PUBLICATIONS, PATENTS

1. Over fifty publications in internationally recognized Computer Science conferences and journals <https://scholar.google.com/citations?user=ybfAUpsAAAAJ&hl=en> (WWW, SIGMOD, PDIS, SIGCHI, VLDB, AAI, SIGIR, CSCW, etc.)

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2. Four US patents Nr. 8,566,699 Nr. 8,533,132 Nr. 6,757,675 Nr. 7,672,908
3. Tiramisu won the Federal Communication Commission Chairman's 2012 Advancement in Accessibility Award in Geospatial location category, 2012.
4. Transportation Research Board Best Paper Award (TRB Public Transportation Group) "Mobile Transit Information via Universal Design and Crowdsourcing," Aaron Steinfeld, John Zimmerman, Anthony Tomatic, Daisy Yoo, Rafae Dar Aziz, Transportation Research Board 2011 Annual Meeting, Washington DC, 2011.
5. Tiramisu is a winner in the Best New Innovative Product, Service or Application in the 2011 Intelligent Transportation Society of America award. Announced at the 18th World Congress on Intelligent Transportation Systems, October 16th 2011.
6. CHI Best Paper Honorable Mention. "Field Trial of Tiramisu: Crowd-Sourcing Bus Arrival Times to Spur Co-Design," John Zimmerman, Anthony Tomatic, Charles Garrod, Daisy Yoo, Chaya Hiruncharoenvate, Rafae Aziz, Nikhil Ravi Thiruvengadam, Yun Huang, Aaron Steinfeld, Proceedings of the Conference on Computer/Human Interaction (CHI), 2011.
7. IFIP Brian Shackel Award for Best Paper, 2011. "Mixer: Mixed-initiative Data Retrieval and Integration by Example," Steven Gardiner, Anthony Tomatic, John Zimmerman, Rafae Aziz, and Kathryn Rivard, in Proceedings of the 13th IFIP TC13 Conference on Human-Computer Interaction (INTERACT), 2011.
8. French National New Venture Competition, 1999. Co-authored E-XMLMedia business plan that was a winner in the French National New Venture Competition. This award led in part to venture capital financing.
9. PDIS Best Paper Award, Second International Conference on Parallel and Distributed Information Systems (PDIS), San Diego, 1993. (\$1000)