



EDUCATOR

ENGINEER

WORK
HISTORY

<p>Brookline High School Brookline MA 2018–</p> <p>Teacher</p> <ul style="list-style-type: none"> Licensed Massachusetts Teacher — Digital Literacy & Computer Science grade 5–12, Mathematics grade 5–12, Technology / Engineering grade 5–12, General Science grade 1–8. Taught <i>AP Computer Science A</i> (Java) <i>CSAwesome</i> (1 year). Taught <i>AP Computer Science Principles Mobile CSP</i> (3 years). Taught <i>Exploring Computer Science</i> (3 years). Taught <i>Java Programming</i> (2 years). Taught <i>WWW Design</i> (2 years). Taught <i>Autonomous Robotics</i> (2 years). <p>Coach / Mentor</p> <ul style="list-style-type: none"> Coached <i>Botball</i> (1 year). Mentored students in entrepreneurship (<i>Technovation Challenge</i>, 3 years and <i>YouthCITIES</i> mini-hacks, 2 years). Maintained <i>website</i> of resources, assignments, and grades. <p>MIT Playful Journey Lab Cambridge MA 2019</p> <p>Summer Journeyer</p> <p>'Much like a fellowship program, <i>Journeyers</i> [are] members of MIT's newly established Playful Journey Lab, working on a combination of current lab projects and their own independent explorations... to create a community of practice where we build, play, experiment, and innovate in assessment and learning.'</p> <p>Winchester High School Winchester MA 2005–18</p> <p>Teacher</p> <ul style="list-style-type: none"> Taught various geometry and integrated mathematics courses in grades 9–12 (13 years). Taught <i>AP Computer Science A</i> (12 years, plus summer school at <i>Phillips Academy Andover</i>). Taught <i>AP Computer Science Principles Mobile CSP</i> (2 years). Taught <i>On-Line Advanced Computer Science</i> (5 years). Taught <i>Exploring Computer Science</i> (1 year). Taught <i>Engineering the Future</i> (5 years). Taught <i>Robotics</i> (5 years). <p>Coordinator</p> <ul style="list-style-type: none"> Held position of <i>Technology / Engineering Coordinator</i>. Had budgetary responsibility and leadership responsibility for five staff. (5 years) Held position of <i>STEM Coordinator</i> for Winchester public schools. Promoted STEM teaching and learning K-12 (5 years). <p>Coach / Mentor</p> <ul style="list-style-type: none"> Coached <i>Winchester Robotics Team</i>, including <i>BotsIQ</i> (5 years), <i>NRL</i> (3 years), <i>Botball</i> (7 years), and <i>USFirst Tech Challenge</i> (1 year). Winchester Robotics Team was 2015 <i>Botball</i> global champions. Mentored students in engineering (<i>Real World Design Challenge</i>, 5 years). Winchester RWDC team Flight 01890 was 2014 & 2018 <i>MA state champions</i>. Mentored students in entrepreneurship (<i>Technovation Challenge</i>, 4 years, <i>YouthCITIES</i> mini-hacks, 5 years, and Winchester Entrepreneurship Club, 2 years). Winchester Technovation teams were 2014 & 2015 global finalists (as chronicled in the <i>CODEGIRL</i> documentary film). Co-mentored <i>Winchester Computer Science Club</i> (3 years), including <i>ACSL</i>, <i>USACO</i>, and <i>WPI High School Programming</i> competitions. Advised students in <i>Winchester Advisory Group</i> program (4 years). Maintained <i>website</i> of resources, assignments, and grades. <p>John M. Tobin School Cambridge MA 2004–05</p> <p>Teacher</p> <ul style="list-style-type: none"> Taught grade 8 mathematics using <i>Connected Mathematics Program</i>; pioneered lesson design and teaching with interactive white board. Conducted grade 7 homeroom; taught weekly grade 7 math study skills class; served as advisor to grade 7 students; facilitated weekly buddy groups; was active member of middle-school cluster. Developed middle school parent communication database; maintained <i>website</i> of assignments and grades. Assisted middle-school science teacher with grade 7 & 8 science classes (3 semesters). 	<p>EnglishCentral.com Lexington MA 2009</p> <p>Developed language-modeling software for language-learning website. Held position of <i>Senior Software Engineer</i>.</p> <p>Virtual Research Associates Weston MA 2007–08</p> <p>Developed software for ingestion and analysis of wire-service news articles for phase one of <i>Integrated Conflict Early Warning System</i> DARPA program. Held position of <i>Senior Software Engineer</i>.</p> <p>MassBay Consulting, LLC Cambridge MA 2003–</p> <p>Co-founded consulting company developing software-based voice products for wireless broadband devices used by businesses and consumers. Held position of <i>Managing Director</i>.</p> <p>ScanSoft®† (née Lernout & Hauspie† (née Dragon Systems)) Burlington MA 1996–2003</p> <p>Held position of <i>Director of Development, AudioMining™</i>. Directed development of ScanSoft's <i>AudioMining™</i> product line, including successful semi-annual releases of <i>Dragon MedialIndexer™</i> and <i>AudioMining Development System</i>. Was instrumental in transfer of L&H <i>AudioMining</i> assets to ScanSoft. Supervised work of ten developers and co-directed product delivery team.</p> <p>Held position of <i>Manager, Telephony Development</i>. Managed Dragon's efforts in over-the-telephone speech recognition — applying Dragon's dictation engine to short-message-service dictation. Supervised work of four engineers.</p> <p>Held position of <i>Senior Telephony Engineer</i> in Dragon's Portable Products Group. Developed distributed, embedded dictation system. Computer languages used: Python, Java, C++, UML.</p> <p>† On 2000/06/07, Dragon was <i>acquired</i> by L&H. ‡ On 2001/12/12, L&H was <i>acquired</i> by ScanSoft. • On 2005/05/09, ScanSoft <i>merged</i> with Nuance.</p> <p>Previous Experience Cambridge MA 1980–95</p> <ul style="list-style-type: none"> As <i>Director of Engineering</i>, helped found telecommunications manufacturing company, <i>Telelogic, Inc.</i>† Co-designed company's major product line, trunk-side least-cost-routing autodialers, of which there were 400,000 in use. As <i>Director of Engineering</i>, helped found product development consulting company, <i>digiTel, Inc.</i> Oversaw development of <i>TEX</i> family of videotex decoders for the Norwegian and Swedish public telephone companies. Designed and implemented digital electronics and software for Siemens videotex decoder infrared keyboard. <p>† Not the <i>Telelogic</i> division of IBM.</p>
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EDUCATION	<p>Cambridge Public Schools Cambridge MA 1993–2003</p> <p>Volunteer</p> <ul style="list-style-type: none"> Volunteered for in-class projects in grades K–8, John M. Tobin School (11 years), including solar car design challenge (4 years), which became part of the citywide grade 6 science curriculum, and electric circuits (5 years), including working with grade 4 to create Tobin's electronic map. Volunteered for after-school 7–8 algebra enrichment and support (2 semesters). Co-taught Tobin Tech Team after-school computer club (1 semester). Member and co-chair of Tobin PTO Science & Technology Committee (11 years); instituted science programs, wrote grants (e.g. \$20,000 Toyota TAPESTRY), and supported teachers and specialists. Parent participant in Tobin restructuring process (2 years). Member of citywide Cambridge Public Schools Science Advisory Group (1 year). 	
	<p>University of Massachusetts Lowell Lowell MA 2011</p> <p>Masters of Education in Curriculum and Instruction: Mathematics, December, 2011.</p> <p>Massachusetts Institute of Technology Cambridge MA 1986</p> <p>Bachelor of Science in Electrical Engineering, June, 1986. Implemented a computer graphics program in PL/I to age facial images for Architecture Machine Group (now called the Media Lab). Thesis titled <i>Explorations in Combinatorial Dynamics</i>, an evaluation of the Novix NC4000 Forth microprocessor for experiments in Information Mechanics. Computer languages studied: LISP, C, PL/I, Pascal, Algol, FORTRAN, and mini and microcomputer assembly languages. Humanities concentration in music.</p>	
AWARDS	Massachusetts Technology Leadership Council <i>Distinguished Leadership Award</i> .	2014
PATENTS	United States Patent No. 4,447,676 . Harris, Jackson and Petty. <i>Automatic dialer for telephone network access control</i> .	1984/06/08
	United States Patent No. 7,003,456 . Gillick, et al.. <i>Methods and systems of routing utterances based on confidence estimates</i> .	2006/02/21
AFFILIATIONS	<p>Member of Brookline Educators Union, Massachusetts Teachers Association, and National Education Association.</p> <p>Member of Computer Science Teachers Association (Co-President of CSTA Greater Boston Chapter, 6 years), National Council of Teachers of Mathematics, International Technology and Engineering Educators Association.</p> <p>Founding participant in Knowledge Home initiative.</p>	<p>Member of Association for Computing Machinery and member of Institute of Electrical and Electronics Engineers.</p> <p>Former Member of Board of Directors of Forth Interest Group. Member of ANS X3J14 technical sub-committee for standardization of the Forth development environment. Also member of Forth Standards Team, precursor to X3J14 and promulgator of FORTH-83. Ten-year participant in Forth Modification Laboratory. Six-year participant in Rochester Forth Conference.</p>
REFERENCES	Available upon request.	

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