Hesam Samimi (Sam)

CONTACT
INFORMATION

Tustin, CA
USA

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https://www.hesam.us/

TITLE

Computer Science Teacher & Curriculum Developer
Software Development Instructor
Software Developer
Former Programming Languages Researcher & Academic

SUMMARY

Sam is a computer scientist and expert programmer and software developer, who has since 2017 primarily focused on project-based curriculum development and teaching of computer science and software development at the secondary school and career prep levels, as well as on online platforms.

He's also a full-stack web and mobile app developer, and the founder and creator of Termeric—an online buy-and-sell marketplace for K-12 school subject curriculums. Sam has also dabbled in the instruction of ESL English, yoga, and meditation.

Before discovering his passion at the crossroads of coding and teaching, he spent seven years during and after his Ph.D. studies at UCLA as a programming languages researcher, focusing on the application of artificial intelligence in programming and software development.

INTERESTS

education of computer science & software development (K-12, college, career prep), instruction, curriculum development, project-based learning, programming, robotics, full-stack software development, web & mobile app development, cloud solutions, artificial intelligence & machine learning

EDUCATION

University of California, Los Angeles, Los Angeles, CA. USA

Ph.D., Computer Science, June 2013

- Area: Programming Languages
- Thesis Title: "From Validation to Automated Repair & Beyond with Constraint Solving"
- Advisor: Prof. Todd Millstein

M.S., Computer Science, June 2009

University of California, Berkeley, Berkeley, CA. USA

B.S., Electrical Engineering & Computer Science, May 2005

CREDENTIALS &
CERTIFICATIONS

Career Technical Education Teaching Credential, CA. USA

California Commission on Teacher Credentialing, 2021

AWS Solutions Architect Course Series Certification, CA. USA

AWS Certificate Courses by LearnKartS via Coursera: Cloud & AWS Basics, AWS Certified Solutions Architect, AWS Advanced, Architecting in AWS, 2025

TEACHING
EXPERIENCE

LearningFuze
Irvine, CA. USA

Web Development Instructor   **July 2024 - July 2025**
Full-stack web development coding bootcamp instructor (online & in-person), topics: HTML5, CSS3, Async, JavaScript, TypeScript, DOM, Git, GitHub, Figma wire-framing, prototyping, ReactJS, Node, Express, PostgreSQL, APIs, servers, databases, data structures, algorithms, interview prep

Garden Grove High School, Garden Grove Unified School District
Garden Grove, CA. USA

CTE Computer Science Teacher **November 2021 - June 2025**

Developing curriculum and teaching Career Technical Education (CTE) computer classes in robotics, programming, and computer science

Termeric Education
https://www.termeric.education/

Principal Web Developer, Curriculum Developer Teacher, Founder **September 2020 - June 2025**

Founder & curriculum and web developer at startup, creating a better online teacher-powered curriculum buy and sell marketplace for teachers and homeschooling parents. Developing computer science curriculum for secondary schools. Principal web developer (front-end & back-end)

Pathumthep Wittayakarn School
Nong Khai, Thailand

Computer Science Teacher **May 2019 - April 2021**

Creating curriculum and teaching junior high computer science, ESL English, and PE for the international/English program

BSD Education
Bangkok, Thailand

Technology Education Curriculum, Content & Web Developer **July 2018 - May 2019**

Developing new curriculum and content for teaching technology (web, mobile app, and game development, AI, databases, programming, cross curricular) to K-12 schools grades 3-12, primarily through web development guided projects

Living Wisdom School High School, Ananda Village
Nevada City, CA. USA

Computer Science Teacher **September 2017 - June 2018**

High school and junior high computer science, programming, math, science history, yoga and meditation instructor

Connected Communities Academy
Nevada City, CA. USA

Software Development Curriculum Developer & Instructor **April 2018 - July 2018**

Programming and app development course curriculum developer and instructor

Udemy.com Online Education
https://www.udemy.com/user/hesamsamimi/

Programming & Computer Science Instructor and Curriculum Developer **June 2017 - July 2018**

Computer science and technology, programming, and mobile app development course curriculum developer and instructor for the secondary school level and beyond

University of California, Los Angeles
Los Angeles, CA. USA

Co-Teacher **Spring 2012**

Co-Teaching a programming language design project course. Supervised and guided independent student projects related to designing new programming languages or frameworks

Teaching Assistant **Fall 2007 & Winter 2008 & Spring 2013**

Programming languages course covering fundamental CS concepts with implementations in ML, Scheme, Java, Python, and Prolog. Software construction laboratory course introducing Linux OS, version control systems, system programming, shell scripting, and network security

ACADEMIC
EXPERIENCE

Communications Design Group, SAP Labs / Viewpoints Research Institute
Los Angeles, CA. USA

Postdoc Researcher & Supervisor **August 2013 - June 2015**

Research on the application of artificial intelligence in programming languages design, frameworks, and software development, advised by Dr. Alan Kay. Supervised undergrad/graduate computer science students conducting research on related topics

Research Consultant **June 2008 - December 2012**

University of California, Los Angeles
Los Angeles, CA. USA

Graduate Student **September 2007 - June 2013**

Ph.D. research on programming languages advised by Prof. Todd Millstein

Microsoft Research India
Bangalore, India

Research Intern **Summer 2010**

Research on program synthesis for distributed programming. Advised by Kaushik Rajan

INDUSTRY
EXPERIENCE

Freelance – Semi Games
https://www.semigames.us/

Full-Stack Web & Mobile Developer **January 2025 - July 2025**

Freelance full-stack web & mobile developer. Focus on TypeScript, ReactJS, and React Native & mobile native application development for web, iOS & Android.

Innovation Group, Communications Dept., Ananda
Nevada City, CA. USA

Mobile App Developer **February 2016 - June 2018**

Design and development of mobile apps related to uplifting consciousness and mindfulness

Yoga and Meditation Teacher **November 2015 - June 2018**

Leading classes of yoga and meditation

Intel Corp.
Santa Clara, CA. USA

Design Automation Software Engineer **January 2005 - June 2007**

Development, maintenance, & support for automation software systems aimed at efficiency, productivity, & reliability of physical verification of design. Automation support for design engineers running verification flow on circuit blocks, including automation of tool runs, quality control, data management

PUBLICATIONS

Hesam Samimi, Alessandro Warth, Mahdi Eslamimehr, Alan Borning. 2015. Constraints as a Design Pattern: from Sketchpad61 to Sketchpad14. In Proceedings of the ACM International Symposium on New ideas, New Paradigms, and Reflections on Programming & Software (Onward!'15)

Mahdi Eslamimehr, Hesam Samimi. 2015. Timing Analysis of Event-Driven Programs with Directed

Testing. In Proceedings of the 15th International Workshop on Worst-Case Execution Time Analysis (WCET'15)

Hesam Samimi, Chris Deaton, Yoshiki Ohshima, Alessandro Warth, Todd Millstein. 2014. Call by Meaning. In Proceedings of the ACM International Symposium on New ideas, New Paradigms, and Reflections on Programming & Software (Onward!'14)

Hesam Samimi, Rebecca Hicks, Ari Fogel, and Todd Millstein. 2013. Declarative Mocking. In Proceedings of the 2013 International Symposium on Software Testing and Analysis (ISSTA'13)

Alan Kay, Ian Piumarta, Kim Rose, Dan Ingalls, Daniel Amelang, Ted Kaehler, Yoshiki Ohshima, Hesam Samimi, Bert Freudenberg, Aran Lunzer, Alan Borning, Bret Victor, and Takashi Yamamiya. 2012. STEPS toward expressive programming systems, a science experiment. VPRI NSF Technical Report, 2012

Hesam Samimi, Max Schäfer, Shay Artzi, Todd Millstein, Frank Tip, and Laurie Hendren. 2012. Automated repair of HTML generation errors in PHP applications using string constraint solving. In Proceedings of the 34th International Conference on Software Engineering (ICSE'12)

Hesam Samimi and Kaushik Rajan. 2011. Specification-based sketching with Sketch. In Proceedings of the 13th Workshop on Formal Techniques for Java-Like Programs (FTfJP'11)

Hesam Samimi, Ei Darli Aung, and Todd Millstein. 2010. Falling back on executable specifications. In Proceedings of the 24th European conference on Object-oriented programming (ECOOP'10)

Alan Kay, Ian Piumarta, Kim Rose, Dan Ingalls, Daniel Amelang, Ted Kaehler, Yoshiki Ohshima, Hesam Samimi, Chuck Thacker, Scott Wallace, Alessandro Warth, and Takashi Yamamiya. 2009. STEPS toward the reinvention of programming. VPRI NSF Technical Report, TR-2009-016, 2009

SKILLS   curriculum development, classroom & online teaching, VEX robotics, Scratch, Snap!, frontend/backend web development, full-stack software development, iOS & Android mobile app design & development, JavaScript, TypeScript, Python, Ruby, Rails, Swift, Java, Objective-C, HTML, CSS, NodeJS, Express, REST APIs, ReactJS, React Native, cloud solutions architecture, AWS, Google Cloud Platform, SQL, Smalltalk, PHP, C#, C, C++, ..., Unix, Linux, Git, CI/CD, artificial intelligence & machine learning, programming language design, testing, verification, automation, yoga & meditation instruction

LANGUAGES   Fluent in English & Persian, Conversational in Thai, Familiar with French & Spanish