

Dinesh Ayyappan

U.S. Citizen | dinesh.ayyappan@upf.edu | www.dineshayyappan.com

Research Interests: AI Safety and Fairness, Human-AI collaboration, AI in Education

EDUCATION

Universitat Pompeu Fabra

PhD in Computer Science

Barcelona, Spain

September 2025 - Present

Georgia Institute of Technology

Master of Science in Computer Science

Atlanta, USA

Jan 2022 - Dec 2024

University of Massachusetts - Boston (Boston Teacher Residency)

Master of Education in Secondary Education

Boston, USA

July 2014

Carnegie Mellon University

Bachelor of Science in Mechanical Engineering

Pittsburgh, USA

Dec 2012

RESEARCH EXPERIENCE

Master's Project: LLM Tutoring

Jan 2024 – Dec 2024

Prof. David Joyner

(remote) Georgia Institute of Technology, USA

- Researched and developed an intelligent assistant that teaches rhetorical analysis and metacognitive skills
- Designed and deployed an IRB-approved study with over 100 subjects involving students, parents, and teachers at a private international school in Singapore
- **Ayyappan D.**, & Joyner D. A. (2025) Building Self-Reliance in an Era of Accessible Intelligent Tutors. Tools for Thought Workshop, CHI 2025, Barcelona, Spain. [Paper]

Research Assistant

June 2023 – Dec 2024

Design & Intelligence Lab, Prof. Ashok Goel

(remote) Georgia Institute of Technology, USA

- Analyzed logged user data and built experimental features in a virtual ecological simulation environment
- Investigated wheel spinning behaviors and developed predictive models for identifying when learners need coaching support
- Led design and development of follow-up study to validate published findings
- Kos, J., **Ayyappan D.**, & Goel, A. K. (2024) A Constructivist framing of wheel spinning: Identifying unproductive behaviors with sequence analysis. Proceedings of 20th International Conference, ITS 2024, Springer, Thessaloniki, Greece. [DOI]

Supervised NLP Research

Aug 2022 – Dec 2022

Prof. David Joyner; Georgia Institute of Technology, USA

(remote) Georgia Institute of Technology, USA

- Examined language used in over 200,000 peer reviews in four courses over three years to uncover grammatical and lexical patterns that differ by L1; supervised by David Joyner

PROFESSIONAL EXPERIENCE

Teacher of Computer Science

July 2020 – June 2023

Singapore American School, High School

Singapore, Singapore

- Developed new curriculum and content for AP Computer Science (CS) A, CS 1, Game Design, and Mobile Apps at a leading, private international school
- Increased enrollment in CS courses over 20% per year and was selected by entire student body for annual teacher award two consecutive years
- Co-founded new student clubs Girls Who Code, Code for All with 60+ members and \$5000 budget

IB Teacher of Math, Computer Science, and Design

July 2018 – June 2020

Woodstock School

Mussoorie, India

- Taught math, design, and computer science from beginner to college-level (AP, MYP, HL) in private, co-ed, international boarding school aligned with IB standards
- Founded and coached extracurricular game development and eSports clubs with 30+ members

Adjunct Faculty, Information Technology Department

Sept 2016 – Aug 2017

Bunker Hill Community College

Boston, MA

- Served as founding teacher for Charlestown Tech, a college pathway program for urban high school students
- Collaborated with Boston-area program partners to adapt curriculum and exhibit student work
- Hosted CEO of Fortune 500 partner *SAP* for in-school fireside chat

Teacher of Physics and Engineering

Sept 2014 – Aug 2017

Charlestown High School

Boston, MA

- Led science team in developing aligned spreadsheets to track student-level competencies
- Conferred with district teachers in skills workshops on effective grading, classroom layout design, inquiry-based science, and formative assessment

Instructional and Tech Support

July 2019

Girls Make Games

San Francisco, CA

- Triageed and responded to technical issues from camps across the US

Instructional Consultant

Oct 2017 – Feb 2018

Charlestown High School

Boston, MA

- Advanced teachers' data-driven decision making with Chief of Evaluation
- Coached 11 teachers individually in making their first or next steps

Design Fellow

Feb 2017 – May 2017

Woodrow Wilson Academy

Boston, MA

- Reviewed a prototype curriculum unit including an online challenge, clinical, studio, and practicum seminar
- Coached 11 teachers individually in making their first or next steps

AWARDS AND HONORS

Connor O’Gorman Cornerstone Award, Singapore American school (2022, 2023)

Finalist, Goethe-Institut Art Games Jam (2017)

Exemplary, Professional Culture (top 10%), Charlestown High School (2017)

Joyful Learning Conference Presenter, Boston Teacher Residency (2015)

First Lecture Young Alumni Speaker, Carnegie Mellon University (2014, 2015)

SKILLS

Programming Languages: Python, Java, C#, JavaScript, CSS, SQL

Methods: Game Development, ML, NLP, DL, RL, CV

Software: Unity, Git, Docker, AWS

Libraries and Frameworks: pandas, NumPy, Matplotlib, Flask, Seaborn, React, Express, MongoDB

Additional spoken languages: Spanish (intermediate), Hindi (beginner), Mandarin (beginner)

PRESS

Podcast: OMSCS Buzz S3E2: Dinesh Ayyappan (Georgia Tech Podcast, September 2024)

Article: Student Spotlight: Dinesh Ayyappan (Georgia Tech News, July 2023)

Article: Teaching, learning, and appreciating with Ms. Leaf and Mr. Dinesh (Woodstock School Student Newspaper, July 2020)

Article: First-year teachers on why they teach (Boston Globe, October 2014)