Mark S. Kim

510.499.7953 ♦ mkim797@yahoo.com

Education

San Francisco State University — 2023 to Present
Data Science and Artificial Intelligence, M.S.
GPA: 4.00
Anticipated Graduation: Aug 2025

San Francisco State University — 2018 to 2023
Computer Science, B.S.
GPA: 4.00
Mathematics: Advanced Studies, B.A.
GPA: 3.98

Conferences

Kim M., Raghuraman S., Puder A., Hayward C., & Yang H. (2025). Predicting Course Transferability Using Deep Embeddings and Traditional Classifiers. Paper to be presented at the International Conference on Educational Data Mining, Palermo, Sicily, Italy.

Kim M., Simon H., Stipe C., & Ihorn S. (2025). Metacognition in Computer Science Learning: Perception vs. Reality. Poster presented at the annual meeting of the National Association of School Psychologists, Seattle, WA, USA.

Simon H., Kim M., & Ihorn S. (2025). The Impact of Early Exposure to Computing on Identity Development. Poster presented at the annual meeting of the National Association of School Psychologists, Seattle, WA, USA.

Kim M., Puder A., Hayward C., & Yang H. (2024). Foundation Models for Course Equivalency Evaluation. Paper presented at the IEEE International Conference on Data Mining: Workshop on Information Seeking with Big Models, Abu Dhabi, UAE.

Kim M., Simon H., Ihorn S., & Kulkarni A. (2024). Bridging the Experience Chasm in Computer Science: An Inter-term Bootcamp Approach. Poster presented at the San Francisco State University College of Science and Engineering Graduate Research and Creative Works Showcase, San Francisco, CA, USA.

Honors & Awards

Graduate Award for Distinguished Achievement — San Francisco State University — May 2025

First place final presentation — Frontiers in Data-Driven Computing REU, University of Houston — Aug 2021

Finalist — Entrepreneurship Symposium Innovation Pitch Competition, San Francisco State University — May 2021

Research Experience

Graduate Researcher — Aug 2023 to Present
San Francisco State University — San Francisco, CA
Principal Investigator: Dr. Hui Yang

AdvisingGPT: Foundation Models for Student Advising
An exploration of using foundation and embedding models to provide automated course equivalency evaluation and personalized program roadmaps to maximize student success rates. The techniques employed include: prompt engineering, in-context learning, and instruction fine-tuning of foundation and embedding models; traditional machine learning for classification using document embeddings; document-level embeddings search and ranking; and retrieval augmented generation.

Graduate Researcher/Program Lead Jan 2023 to Present
San Francisco State University — San Francisco, CA
Principal Investigators: Dr. Anagha Kulkarni and Dr. Shasta Ihorn

Artificial Intelligence Scholarships that Improve Academic Achievement, Retention, and Career Success (AI-STAARS)
An examination of methods to improve students' sense of belonging and identity with the field of Computer Science, and the effect it may have on students' retention and success. Qualitative research on metacognition through a comparative analysis of in-class assessed performance against students' perceived understanding. Data is collected through interviews, surveys, and observations of students during discussions.

Research Engineering Intern Jun 2022 to Aug 2022
Cofense Inc. — Leesburg, VA
Research Supervisor: Chip McSweeney, Senior Research Engineer

Phishing Emails: High Speed Clustering and Analysis
An investigation of clustering for the early detection and categorization of phishing emails with an emphasis on computational speed and performance. Python C extensions that parse and analyze emails were restructured and optimized, removing memory leaks and increasing data utilization by 5%. Refactored Python code base towards thead-based and process-based asynchronous parallelization which yielded an 80% reduction in processing time. Tradeoffs between dimensional reduction (PCA) and maintaining data precision were examined and analyzed.

NSF REU Scholar and Researcher Jun 2021 to Aug 2021
University of Houston — Houston, TX
Funding by the National Science Foundation
Program Director: Dr. Ionnis Pavlidis
Principal Investigator: Dr. Ernst Leiss

Frontiers of Data-Driven Computing REU
Developed and implemented multi-threaded and asynchronous retrieval algorithms for over 10 million records of affective research data (documents and authors) from Scopus, PubMed, and Web of Science. Performed exploratory clustering and co-occurrence matrix analysis of retrieved data to facilitate the investigation of a quantitative history of affective research.

Undergraduate Research Assistant Apr 2020 to Jun 2020
San Francisco State University — San Francisco, CA
Research Supervisor: Dr. Shandy Hauk

Remote Instruction Pedagogy in Mathematics
Provided an academic literature review of research in pedagogical best practices for remote instruction. This review was to inform new research in remote instruction in response to the COVID-19 pandemic.

Undergraduate Research Assistant Nov 2019 to Jan 2020
San Francisco State University — San Francisco, CA
Research Supervisor: Dr. Alexandra Piryatinska

Change-point Analysis Algorithm Development
Attended workshops in numerical methods and statistics theory in preparation for research in change-point analysis algorithm development. Studied completed change-point analysis research and began work on adapting existing Matlab code to Python.

Teaching & Advising

Program Lead/Graduate Researcher Jan 2023 to Present
San Francisco State University — San Francisco, CA
Artificial Intelligence Scholarships that Improve Academic Achievement, Retention, and Career Success (AI-STAARS)

Develop and lead a three pronged support system to improve student success by reinforcing foundational knowledge, providing intensive advising, and engaging students with activities and exercises. This includes: a weekly intra-term lecture and workshop series; a weeklong programming foundations bootcamp to reduce learning loss; and a 10 week accelerated summer course in Machine Learning and Artificial Intelligence.

Mathematics Program Liaison Jan 2024 to May 2024
Computer Science Program Liaison Aug 2023 to Dec 2023
San Francisco State University — San Francisco, CA
Center for Science and Mathematics Education (CSME)

Lead a team of undergraduate facilitators that teach and support students taking supplementary courses in Mathematics and Computer Science.

Facilitator Jan 2021 to May 2023
San Francisco State University — San Francisco, CA
Center for Science and Mathematics Education (CSME)

Develop lesson plans and lead supplementary courses in Mathematics and Computer Science. These complementary courses deepen subject knowledge and improve student outcomes in their parent courses.

Undergraduate Teaching Assistant Aug 2019 to Dec 2020
San Francisco State University — San Francisco, CA
Department of Mathematics
Grade and provide feedback for homework assignments and exams. Maintain online learning management system (iLearn).

Leadership

Association for Computing Machinery (ACM), SFSU Student Chapter Sept 2019 to Present
Treasurer, May 2023 to May 2024
President, Jan 2022 to May 2023

SF Hacks May 2022 to Present
Judge and Mentor, 2024 and 2025
Treasurer, May 2022 to May 2024

CS{Research} Club Aug 2023 to Present
President/Founder, Aug 2023 to Present

Artificial Intelligence Club Aug 2023 to Present
Treasurer, Aug 2023 to Present

Korean Student Association Aug 2024 to Present
President, Aug 2024 to Present

Professional Memberships

Society for Industrial and Applied Mathematics (SIAM)
Association for Computing Machinery (ACM)
National Association of School Psychologists (NASP)
Institute of Electrical and Electronics Engineers (IEEE)

Professional Experience

Financial Center Manager, Assistant Vice President 2017 to 2018
Bank of America — Belmont, CA

Founder/CEO 2005 to 2017
Kindred Enterprises Incorporated — San Francisco, CA

Loan Officer 2003 to 2005
BayCal Financial — San Jose, CA

Landing Support Specialist, Corporal 1995 to 2001
United States Marine Corps Reserve — San Jose, CA

References

Hui Yang
Professor
Department of Computer Science
San Francisco State University
415.338.2221, huiyang@sfsu.edu

Shasta Ihorn
Associate Professor
Department of Psychology
San Francisco State University
415.338.3218, sihorn@sfsu.edu

Jessica Fielder
Supplemental Instruction Program Director
Center for Science and Mathematics Education
San Francisco State University
415.405.0540, jfielder@sfsu.edu

Anagha Kulkarni
Professor and Associate Department Chair
Department of Computer Science
San Francisco State University
415.338.2539, ak@sfsu.edu

Arno Puder
Professor and Department Chair
Department of Computer Science
San Francisco State University
415.338.2853, arno@sfsu.edu

Dragutin Petkovic
Professor
Department of Computer Science
San Francisco State University
415.338.2261, petkovic@sfsu.edu