

Education

SAN FRANCISCO STATE UNIVERSITY

2018 to Present

Computer Science, B.S. AND Mathematics: Advanced Studies, B.A.

Anticipated graduation: May 2023

GPA: 4.00

UNIVERSITY OF CALIFORNIA AT DAVIS

1995 to 2000

Uncompleted Genetics B.S.

Honors & Awards

First place final presentation for the Frontiers in Data-Driven Computing REU at the University of Houston Aug 2021

Finalist of the SFSU Innovation and Entrepreneurship Pitch Competition May 2021

Dean's List, San Francisco State University 2018, 2019, 2020, 2021, 2022

Research and Fellowships

PHISHING EMAILS: CLUSTERING AND ANALYSIS - Leesburg, VA

Jun 2022 to Aug 2022

Cofense Inc.

Research Supervisor: Chip McSweeney, Senior Research Engineer

- Investigation of clustering for early detection and categorization of phishing emails with an emphasis on computational speed and performance.
- Restructure and optimize Python C extensions that parse and analyze emails. Reduced memory usage by 95% and increased data utilization by 5%.
- Develop and validate thread-based and process-based parallelization (asynchronous). Reduced total processing time by 80%.
- Examine and analyze tradeoffs between dimensional reduction (PCA) and maintaining data precision.

GRAPHICAL MODELS FOR BRAIN NETWORKS - San Francisco, CA

Jan 2022 to May 2022

San Francisco State University Department of Mathematics

Research Supervisor: Dr. Serkan Hosten

- Study and exploration of *Graphical Models* by Steffen Lauritzen and "Fused graphical lasso for brain networks with symmetries" by Ranciati, Saverio et al.

FRONTIERS OF DATA-DRIVEN COMPUTING REU - Houston, TX

Jun 2021 to Aug 2021

University of Houston Department of Computer Science

Funding by the National Science Foundation

Principal Investigator: Dr. Ernst Leiss

Research Supervisor: Dr. Ionniss Pavlidis

- Develop and implement retrieval algorithms for affective research data (documents and authors) from Scopus, PubMed, and Web of Science.
- Exploratory clustering and co-occurrence matrix analysis of retrieved data for a quantitative history of affective research.

COB INNOVATION AND ENTREPRENEURSHIP FELLOWSHIP - San Francisco, CA

Sept 2020 to May 2021

San Francisco State University Lam Family College of Business

Faculty Director: Dr. Sybil Yang

- Cross-functional collaboration with co-founders to design and develop test preparation platform for disenfranchised students.

REMOTE INSTRUCTION PEDAGOGY IN MATHEMATICS - San Francisco, CA

Apr 2020 to Jun 2020

San Francisco State University Department of Mathematics

Research Supervisor: Dr. Shandy Hauk

- Academic literature review of research in pedagogical best practices for remote instruction.

CHANGE-POINT ANALYSIS ALGORITHM DEVELOPMENT - San Francisco, CA
San Francisco State University Department of Mathematics
Research Supervisor: Dr. Alexandra Piryatinska

Nov 2019 to Jan 2020

- Workshops in numerical methods and statistics theory in preparation for research in change-point analysis and algorithm development.
- Study of completed change-point analysis research with the goal of adapting Matlab code to Python.

Organizations

ASSOCIATION FOR COMPUTING MACHINERY (ACM), SFSU Student Chapter
President, May 2022 to Present

Sept 2019 to Present

SF HACKS
Treasurer, May 2022 to Present

May 2022 to Present

SOCIETY FOR INDUSTRIAL AND APPLIED MATHEMATICS (SIAM)

Oct 2021 to Present

Employment History

UNDERGRADUATE TEACHING ASSISTANT
San Francisco State University - San Francisco, CA
Center for Science and Mathematics Education (CSME)

2021 to Present

UNDERGRADUATE TEACHING ASSISTANT
San Francisco State University - San Francisco, CA
Department of Mathematics

2019 to 2021

FINANCIAL CENTER MANAGER, AVP
Bank of America - Belmont, CA

2017 to 2018

FOUNDER/CEO
Kindred Enterprises Incorporated - San Francisco, CA

2005 to 2017

LANDING SUPPORT SPECIALIST, Corporal
United States Marine Corps Reserve - San Jose, CA

1995 to 2001

Skills & Competencies

LANGUAGES: Python, Java, C/C++, JavaScript, HTML, CSS, MySQL, Matlab, R

OPERATING SYSTEMS: Windows, MacOS, Linux (Ubuntu, Debian)

WEB FRAMEWORKS/ENVIRONMENTS: Node.js, Express.js, React.js, Handlebars.js

LIBRARIES: Pandas, NumPy, scikit-learn, Matplotlib, BeautifulSoup, Plotly, Dash

DEPLOYMENT/CLOUD COMPUTING: AWS (EC2, S3, and Route53), Google Cloud (Compute Engine, Storage, Domains), Google Analytics, NGINX

DEVELOPMENT PLATFORMS: Docker, Git, Jupyter, Conda

DEVELOPMENT ENVIRONMENTS: VSCode, IntelliJ IDEA, Visual Studio, PyCharm

OTHER: \LaTeX , Adobe Creative Suite (XD, Illustrator, InDesign, Photoshop)



Mark S. Kim