

Sebastian “Tom” Regpala

Bakersfield, CA

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RESEARCH INTERESTS

GPU Architecture, Computer Graphics, Hardware Acceleration, Adversarial Machine Learning

EDUCATION

California State University, Bakersfield, Bakersfield, CA, United States
Bachelor of Science in Computer Engineering

Aug 2021 — May 2025
Cumulative GPA: 3.52/4.00

RESEARCH EXPERIENCE

UC Merced CV PATH Summer Experience 2025

Research Assistant

Bakersfield, CA
May 2025 — Present

- Conducted an extensive deep learning security survey with a focus on attack and defense mechanisms for Transformer models and compiled 46 recent publications into a review paper for submission.
- Developed a novel defense mechanism against side-channel attacks on Transformer models by utilizing GPU kernel selection randomization and optimization.
- Implemented existing side-channel attack methodology on various Transformer models for vulnerability analysis.
- Expressed findings through a review paper, research paper, and poster symposium at the end of the program.

UC Merced CV PATH Summer Experience 2024

Research Assistant

Bakersfield, CA
May 2024 — Sep 2024

- Built a dataset by querying government repositories including the US Census Bureau, CDC, and California Air Resources Board.
- Ran statistical analysis through programming scripts in the R programming language, processing data for correlation, geospatial, and multilinear regression analysis.
- Expressed findings through a research paper, poster symposium, computer program, and animated data visualizations.

PROJECTS

Integrating LSTM RNNs into Traditional Integer GARCH Models for Influenza Hospitalizations Forecasting

Bakersfield, CA

CSUB - Undergraduate Research Assistant

Aug 2024 — May 2025

- Constructed an LSTM RNN model trained on public health data with an emphasis on utilizing GPU acceleration to optimize performance.
- Integrated the model into traditional integer GARCH models for enhancing influenza hospitalizations forecasting.
- Queried data from publicly available repositories, with an emphasis on influenza hospitalizations and environmental factors.

PUBLICATIONS

T. Regpala, J. Ramos, and A. Malek, “*An Introductory Survey of Transformers and Adversarial Machine Learning*,” submitted for publication, 2025.

WORK EXPERIENCE

CSUB - Information Technology Services

Information Technology Assistant - Student Lead

Fall 2021 — July 2025

- Provided Tier 1 and Tier 2 support for diverse tech needs including, but not limited to: operating systems, VoIP telephone systems, and enterprise applications, while ensuring seamless network, domain, and online campus account operations.
- Opened and resolved over 30+ weekly tickets via ServiceNow to support the entire CSU campus; serving VIPs, staff, faculty, and students.
- Trained, mentored, and led a high-performing team of 20 IT student hires in adhering to campus procedures and IT duties.
- Implemented and enforced IT security protocols, and engaged in identifying and mitigating phishing attempts in campus-wide email communications.

- Maintained and managed group policies with Active Directory (AD), ensuring compliance with security protocols and streamline access control across the campus infrastructure.

AWARDS

CSUB NSME Dean's List

Spring 2022 — Spring 2025

Maintained a GPA higher than 3.25 as a full-time student for 6 consecutive semesters

OTHER EXPERIENCES

Summer Research in Artificial Intelligence: From Secure to Local LLMs Seminar Speaker

California State University, Bakersfield
Nov 2025

- Presented a seminar-style talk to CSUB faculty and students on topics such as LLM development, fine-tuning, and adversarial machine learning.
- Explored ethical and secure AI practices, including responsible, privacy-aware model use and data governance considerations.
- Presented GPU benchmarks evaluating various defense mechanisms against deep learning side-channel attacks.

Kaibigan - Filipino American Student Organization

California State University, Bakersfield
Aug 2023 — May 2025

Member

- Promoted enrichment of Filipino heritage and history through community culture events.
- Explored Filipino-American identity through guest lecturers during club activities.
- Helped raise funds for the organization and the Filipino Excellence Scholarship through local sponsorships.

SKILLS

- **Programming:** Python, PyTorch, C/C++, C#, R, MATLAB, MIPS, ARM, CUDA, VHDL
- **Software:** RStudio, VIM, Altera Quartus, KiCAD, Visual Studio Code, AutoCAD, Microsoft 365, AWS, NI LabVIEW, Linux (Arch & Ubuntu)

REFERENCES

Anjana Yatawara, Ph.D.

Department of Mathematics

California State University, Bakersfield

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Scholar Profiles: CSUB - Mathematics Full-Time Faculty — Google Scholar — LinkedIn

Amin Malekmohammadi, Ph.D.

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