

SILA TAMANG

CURRICULUM VITAE

Software Engineer · Educator · Researcher · Community Leader

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🏆 2026 Women of Impact — United Nations Association, OKC · NextGen Under 30 Oklahoma (2025) · CS Outstanding Graduate Award · 9 Scholarships & Awards · 7+ Conference Presentations

PROFESSIONAL PROFILE

Software Engineer, 2026 Women of Impact honoree (United Nations Association of Oklahoma City), and NextGen Under 30 Oklahoma honoree with 6+ years of professional experience across startup and enterprise environments, and 10+ years of sustained community involvement in STEM education and DEI advocacy. Reduced app load times by 30% at Hobby Lobby and automated 150+ analytics reports at WhoFi — a fast-growing startup serving 200+ enterprise locations. Concurrent roles in engineering, academia, and volunteer leadership demonstrate end-to-end ownership, cross-functional coordination, and the ability to drive measurable outcomes in high-ambiguity environments. First-generation college student and international scholar committed to expanding access to computer science education for underrepresented communities.

TECHNICAL SKILLS

Languages: JavaScript, C#, Dart, Python, Java, Kotlin, Swift, PHP, SQL, C++

Mobile & Cross-Platform: Flutter, Dart, Android SDK (Java/Kotlin), iOS (Swift), React Native — 4+ years production

Web & Frontend: React.js, Node.js, HTML5, CSS3, Bootstrap, REST APIs, Webhooks, JSON

Backend & Cloud: .NET Framework, Microsoft Azure, AWS (Lambda, S3), PHP, Node.js, CI/CD, System Design, SNMP V3

Databases: PostgreSQL, SQL Server, MySQL — large-scale querying, analytics pipelines, report automation

Hardware & IoT: Arduino, Raspberry Pi, Scratch, Robotics, 3D Design, VR/Mixed Reality Equipment

Cybersecurity: Network Security, Threat Analysis, Ransomware Research, Security Documentation, CodePath Certified

Research & Analysis: SPSS, Qualtrics, Survey Design, Statistical Analysis, Data Visualization

Leadership & Pedagogy: Curriculum Design, Agile/Scrum, Team Leadership, Mentorship, Cross-functional Collaboration, Public Speaking

Media & Production: Live Broadcast, Multi-Camera Operation, Live Streaming, AV Production, VR/Mixed Reality

PROFESSIONAL EXPERIENCE

Software Development Engineer · [Hobby Lobby — Museum of the Bible Team](#) Apr 2023 – Present

- Architect and maintain a cross-platform Flutter/Dart mobile application for the Museum of the Bible (MOTB), serving iOS and Android users across global audiences.
- Reduced app load times by 30% through Dart performance profiling, memory optimization, and systematic code refactoring using Android Studio and Xcode.
- Increased user satisfaction by 25% and engagement by 15% through responsive widget-based UI design and performance-first component architecture.
- Lead peer code reviews in Git, enforce clean architecture and testing standards, and mentor engineers — maintaining a scalable, low-technical-debt codebase.
- Coordinated end-to-end feature delivery: scoping, building, testing, and deploying across product, design, and QA teams in Agile/Scrum sprints via Jira.
- Implemented in-app analytics tracking across iOS and Android to monitor engagement funnels and inform data-driven product decisions.

Adjunct Professor, Computer Science · [University of Central Oklahoma](#) · [Part-time](#) · [Concurrent](#) Aug 2023 – Present

- Improved project outcomes by 30% and project completions by 80% designing and delivering undergraduate C# and SQL coursework aligned with real-world Agile development workflows.
- Mentored 100+ students on debugging, OOP design patterns, and professional coding practices using Visual Studio and SQL Server — achieving 80% project completion success rate.
- Developed project-based assessments requiring students to build functional applications from scratch, increasing engagement by 25% and producing portfolio-ready deliverables.
- Collaborated with department faculty on course planning, curriculum alignment, and student academic support initiatives.

Software Engineering Instructor · [iCode School Franchise](#) · [Part-time](#) · [Concurrent](#)

Feb 2023 – Present

- Deliver project-based curriculum across 7 disciplines: HTML5/CSS3/Bootstrap, Python, C#, Java, game development (C#), Arduino, Raspberry Pi, and 3D design.
- Increased student project completion rates by 5% and class participation by 10% through interactive, hands-on teaching methodology.
- Guide students through hardware-software integration using Arduino and Raspberry Pi, building foundational IoT and embedded systems skills.
- Foster an inclusive, encouraging classroom environment making complex topics accessible to beginners across age groups and backgrounds.

Broadcast Technician & Prison Ministry Leader · [Life.Church](#) · [Part-time](#) · [Concurrent](#)

Jan 2019 – Present

- Operate professional multi-camera video systems for live in-person and streaming services, delivering broadcast-quality footage for Life.Church's global online audience.
- Trained and onboarded new volunteers on camera operation and live production workflows — reducing ramp-up time and maintaining production quality standards.
- Lead a 7-person volunteer team in the God Behind Bars Prison Letter Ministry — distributing, coordinating, and submitting letter correspondence between church members and incarcerated individuals across the prison system.
- Provide pastoral support and monthly progress reporting to Life.Church Online Team to ensure group health, volunteer readiness, and operational success.

Software Engineer · [WhoFi \(Startup\)](#)

Aug 2019 – Aug 2022

- Built and maintained full-stack web and analytics apps serving 200+ enterprise locations using PHP, JavaScript, C#, and SQL — engineered complete system from data ingestion to client-facing dashboards.
- Built Disconnect Email Alert system for 200+ library locations (PHP, JavaScript) — increased operational efficiency by 20% through real-time patron notifications.
- Developed foot traffic analytics dashboard enabling retail clients to optimize store hours, contributing to a 7% increase in client sales.
- Built C#/.NET plugins integrating Aruba SNMP V3, DHCP, and Ruckus SmartCell Insights across 40+ enterprise branches — improved data pipeline accuracy by 17%.
- Eliminated manual reporting overhead by automating 150+ on-demand and scheduled SQL reports, enabling data-driven client decisions at scale.
- Cut device onboarding time by 50% using Android (Java/Kotlin) and iOS (Swift) diagnostic tools; managed distributed infrastructure on Microsoft Azure and implemented serverless event-driven workflows using AWS Lambda and S3.
- Owned end-to-end feature delivery: scoping, building, testing, and deploying — operating across multiple concurrent workstreams in a fast-moving startup environment.

RESEARCH & ACADEMIC EXPERIENCE

Research Assistant — K-12 Physical Computing Outreach · [University of Central Oklahoma](#)

Aug 2016 – Dec 2019

- Led K-12 CS outreach research on physical computing, reaching 150+ high school students from rural, minority, and underrepresented STEM communities across Oklahoma.
- Managed team of 5 undergraduate researchers producing 5 Scratch, 7 Raspberry Pi, and 5 Robotics lesson plans used in active outreach programs.
- Conducted 25+ introductory and intermediate workshops connecting software to hardware via Python and IoT sensors (LED lights, buzzers, ultrasonic and motion sensors).
- Developed 7 Python/IoT lesson plans introducing embedded systems concepts to students with zero prior CS exposure.
- Coordinated regulatory documentation and compliance filings for the research program.
- Partnered with STEM GEAR UP, Upward Bound Central, and Upward Bound Math-Science for women and minority empowerment in tech.
- Selected as Google igniteCS Mentor — expanded CS education access for underrepresented students in the local community.
- Presented original research at 7+ national and regional conferences (see Conference Presentations section).

Research Assistant — K-12 CS Education Study in Oklahoma · [University of Central Oklahoma](#)

Aug 2015 – Jul 2016

- Contributed to a statewide research study on K-12 CS education, collecting and analyzing survey data from 100+ participating Oklahoma teachers.
- Designed and distributed surveys to identify curriculum gaps, resource deficiencies, and professional development needs among CS educators.
- Analyzed data using SPSS and Qualtrics — translating survey responses into actionable strategic findings.
- Co-developed professional development recommendations for CS teachers at higher education institutions.
- Presented research findings at Oklahoma Research Day and Texas Christian University.

Multimedia Specialist · [Center for eLearning & Connected Environment, UCO](#)

Aug 2016 – Sep 2019

- Developed and maintained university websites using C#, PHP, JavaScript, HTML5, CSS3, SQL, and Bootstrap — meeting UCO design and accessibility standards.
- Collaborated with writers and designers to produce cohesive, accessible web interfaces for multiple UCO departments.
- Operated AV and media production equipment including digital video cameras, lighting rigs, microphones, and VR/mixed reality setups.
- Provided technical support and timely resolution for interactive learning applications used in classroom and remote learning environments.

Google igniteCS Team Leader · [Google](#) Sep 2017 – Sep 2018

- Selected and certified by Google to lead a 6-member undergraduate team delivering CS education and physical computing workshops to 150+ local community students.
- Developed educational materials and programs using Scratch, Raspberry Pi, and Robotics — students produced 5 Scratch games, 7 Raspberry Pi programs, and 5 Robotics projects.
- Received formal Google igniteCS training and certification in CS education mentorship and community outreach leadership.
- Managed logistics for 40 computers distributed to program participants, ensuring all equipment was configured and operational.

STEM GEAR UP Summer Peer Mentor · [U.S. Department of Education](#)

May 2017 – Jul 2017

- Mentored 20 high school girls on CS pathways and STEM careers through the federally funded GEAR UP program.
- Designed and facilitated multi-discipline STEM workshops building confidence, motivation, and leadership in young women entering STEM.

Math & Computer Science Student Assistant · [UCO Mathematics & Science Administration](#)

Aug 2017 – Dec 2017

- Provided technical and administrative support to the UCO Math and CS department — troubleshooting issues across classrooms, labs, and offices.
- Set up AV equipment and presentations for department events; monitored and maintained the Computer Science Lab daily.

Metadata & Cataloging Specialist · [UCO Chambers Library](#) Aug 2016 – May 2017

- Cataloged federal government information using SUDOC classification, reducing processing backlogs and improving collection accessibility for patrons.
- Assisted patrons in navigating federal and state government resources across online, physical, and microfilm formats.

VOLUNTEER LEADERSHIP

Student Mentor · [NCWIT — National Center for Women & IT](#)

Apr 2018 – Present

- Mentor high school girls on CS career pathways and academic preparation — actively promoting diversity and inclusion in computing for 7+ consecutive years.
- Contribute to NCWIT's national mission of building an inclusive tech industry by creating empowering environments for young women aspiring to enter tech.

Teacher — DEI & Multicultural Education · [World Experiences Foundation](#)

Aug 2016 – Present

- Deliver interactive anti-bias, multicultural, and multilingual lessons in public school classrooms fostering cultural awareness, global citizenship, and cross-cultural understanding.
- Facilitate inclusive discussions promoting respect for diversity — contributing to reduced stereotyping and improved community relations among students from varied backgrounds.

Student Volunteer · [Endeavor Games — Adaptive Sports](#)

Jun 2016 – Present

- Support athletes with disabilities through equipment setup, safety monitoring, and personalized assistance at one of the nation's premier adaptive sports events for 9+ consecutive years.

NOTABLE PROJECTS

Code Okie: One Line at a Time · [University of Central Oklahoma](#)

Aug 2016 – Present

- Founded and sustained a 9-year ongoing CS outreach initiative reaching 200+ students through Python and IoT programming workshops targeting underrepresented communities.
- Developed IoT-based lesson plans integrating hardware programming to make CS tangible for beginners; partnered with STEM GEAR UP, Upward Bound, and Google igniteCS.

Ransomware Research & Technical Demonstration · [University of Central Oklahoma](#)

Aug – Dec 2018

- Researched and documented ransomware attack vectors, encryption mechanisms, patch management strategies, and defensive countermeasures.

- Implemented a live technical demonstration illustrating ransomware behavior and system hardening — directly complementing CodePath Cybersecurity certification (2023).

EDUCATION

Bachelor of Science, Computer Science · Minor in Mathematics Aug 2015 – May 2019

University of Central Oklahoma · Edmond, Oklahoma · In-Major GPA: 3.78 · First-Generation College Student

Relevant Coursework: OOP & Data Structures, Web-Server & Mobile Apps Programming, Internet of Things, Linear Algebra, Discrete Mathematics, Statistics

Campus Leadership:

- ACM (Association for Computing Machinery) — Secretary • Nepal Student Association — Webmaster & PR Officer
- Diversity Round Table (DRT) — Campus Involvement Chair • Volunteer Advocacy Council — Treasurer
- Food Recovery Network — PR & Social Media Coordinator

CERTIFICATIONS

CodePath Intro to Cybersecurity · CodePath · Credential ID: 142996 May 2023

Google igniteCS Certification · Google · CS Education Mentorship & Community Outreach Leadership

HONORS & AWARDS

 **2026 Women of Impact** · [United Nations Association of Oklahoma City \(UNA-OKC\)](#) Mar 2026

Selected as a 2026 Women of Impact honoree by the United Nations Association of Oklahoma City — a local chapter of the UNA-USA, a nationwide nonprofit dedicated to educating, inspiring, and mobilizing Americans to support the mission and values of the United Nations. Honored at a formal dinner and awards ceremony at Redlands Community College alongside Jena Marr, the first female president of the college, and a distinguished group of women representing leadership across multiple sectors in the Oklahoma community. Recognition aligns with the UN Sustainable Development Goals (SDGs) — including gender equality, human rights, and strong communities — for sustained contributions to technology education, STEM equity, DEI advocacy, and community empowerment.

 **NextGen Under 30 Oklahoma** · [NextGen Under 30 Oklahoma](#) Nov 2025

Statewide recognition for outstanding young professionals under 30 — honored for excellence in software engineering, CS education, and technology community impact. One of fewer than 30 honorees selected across all industries statewide.

Computer Science Outstanding Graduate Award · [UCO Math & Computer Science Dept.](#) Dec 2019

Awarded to graduating seniors for excellence in coursework, undergraduate research, and contributions to the CS department and student community. Selected based on GPA (3.78), research involvement, and departmental service.

John Taylor Beresford Endowed Scholarship · [UCO Math & Computer Science Dept.](#) Jan 2015

Awarded \$7,500 annually for academic achievement, leadership demonstration, and active involvement in Math and CS department activities — one of the department's most prestigious merit-based awards.

Leaders of Tomorrow (2016–2019) · [University of Central Oklahoma Leadership](#) Aug 2016

9-hour tuition waiver per semester for academic excellence and demonstrated leadership. Required 100+ volunteer hours annually. Held for 3 consecutive years.

Foundation Continuing Education Scholarship · [University of Central Oklahoma](#) Jul 2018

Awarded \$1,000 per semester as a first-generation college student based on academic achievement and university involvement.

Academic Kiran Scholarship · [Nepal Student Association, UCO](#) Aug 2015

Merit-based award recognizing academic standing and active contributions to the Nepali student community and campus life.

Non-Resident Fee Waiver Award (2015–2019) · [Office of Global Affairs, UCO](#) Jun 2015

Awarded \$1,000 per semester for academic achievement and involvement with the International Student Council of UCO.

Global Scholarship (2014–2019) · [University of Central Oklahoma Leadership](#) Aug 2014

Awarded \$1,500 per semester for academic achievement and involvement in UCO Global Affairs. Held throughout undergraduate studies.

CONFERENCE PRESENTATIONS & RESEARCH DISSEMINATION

- National Conference for Undergraduate Research (NCUR) — 2018, 2019 • Oklahoma Research Day (ORD) — 2017, 2018, 2019
- Consortium of Computer Science Collegiate — 2017 • Transformative Learning Conference (TLC) — 2018, 2019
- Texas Christian University Research Presentation — 2016

All presentations focused on K-12 CS outreach, physical computing education, and expanding access to computer science for underrepresented communities.