

Nicole C. Montecillo



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Computer Science student with a multidisciplinary background in Arts & Technology, passionate about artificial intelligence, machine learning, and computer vision. Skilled in Python, OpenCV, and C++, with hands-on experience developing innovative software and image-processing solutions through internships at NASA Jet Propulsion Laboratory. Combines creative thinking with technical expertise to solve real-world problems.

TECHNICAL SKILLS

Programming Languages	Frameworks & Tools	Technologies	Creative Software
Python C++ Java Processing	TensorFlow PyTorch OpenCV NumPy	Computer Vision Machine Learning AI	Photoshop Capcut Premiere Pro Canva

EXPERIENCE

Software Engineer Intern – Computer Vision & Robotics

NASA Jet Propulsion Laboratory (La Cañada Flintridge, CA)

June 2014 – August 2014

- Developed software for automated terrain analysis using OpenCV and Python, streamlining aerial image processing. Conducted data analysis on aerial imagery to enhance map clarity and elevation resolution.
- Integrated OpenStreetMap (JOSM) and Java tools to align geographic data with visual inputs.

Software Engineer Intern – Computer Graphics & Visualization

NASA Jet Propulsion Laboratory (La Cañada Flintridge, CA)

January 2015 – March 2015

- Contributed to rover navigation and automated payload handling with 6 key software optimizations.
- Captured and processed data from 24 stereo camera systems.
- Built custom image processing workflows using edge detection, smoothing, and interpolation.

Media & Communications Specialist

Associated Students Inc. of CSU San Marcos (San Marcos, CA)

August 2022 – May 2023

- Led 15 projects across social media and print, enhancing campus-wide identity.
- Increased design efficiency by 20% with optimized workflows and advanced tools.
- Captured and edited over 100 campaign images for digital and print platforms.

Social Media Coordinator

Gofynder (Remote – Carlsbad, CA)

November 2021 – February 2022

- Designed 50+ original graphics for social platforms, boosting brand consistency.
- Created a strategic 30-day content calendar to improve engagement and visibility.
- Collaborated directly with CEO to enhance digital marketing strategy.

Computer Science Lab Assistant

Saddleback College (Mission Viejo, CA)

June 2013 – May 2014

- Tutored over 50 students in Python, Java, and C++ coursework.
- Supported faculty and students during lab sessions, debugging and troubleshooting.
- Helped maintain lab equipment and developed instructional material for 20+ sessions.

EDUCATION

Georgia Institute of Technology

Online M.S. in Computer Science – Expected 2028

Relevant Coursework: Algorithms, ML, Computer Vision, AI for Robotics

California State University San Marcos

B.A. in Arts & Technology – Graduated 2023

Relevant Coursework: Data Visualization, Computer Graphics, Visual Communication

Irvine Valley College

A.A. in Studio Arts – Graduated 2020

Relevant Coursework: 2D/3D Design, Color Theory, Photography, Graphic Design

PUBLICATIONS & EXHIBITIONS

Montecillo, Nicole. "*Robotic Control for Automated Cargo Handling*."

Collaborated with a team at NASA JPL to enhance C++ software for automated cargo handling, integrating OpenCV for stereoscope imagery processing on rovers, improving movement and calibration for streamlined operations. June 2014.

Montecillo, Nicole. "*Color Me Bright*" is an interactive digital media project created with Processing libraries on iPad. It showcases a color-shifting circle that changes based on user input, using color psychology to evoke various emotions. The circle's motion mimics a slow, trailing path, reminiscent of a snail's movement. Displayed at the "Breaking Imaginations" art exhibition at California State University, San Marcos, in December 2022.

Montecillo, Nicole. "*Coastal Captivation*." Video art collaboration showcasing footage and found videos from Southern California beaches. Hillstreet Country Club, May 2023.

Montecillo, Nicole. "*Forgiven*." Acrylic pour painting exploring healing and transformation through layered color. Exhibited in the ASI Student Art Exhibition at California State University San Marcos, University Student Union bridge. May 2023.

INDEPENDENT COURSEWORK

Audited without Certification:

- Introduction to Computer Vision and Image Processing: IBM
- Computer Vision with Embedded Machine Learning: Edge Impulse
- Computer Vision Basics: University at Buffalo

ORGANIZATIONS & AFFILIATIONS

- Software Craftsmanship Manifesto <https://manifesto.softwarecraftsmanship.org/>
- Women in Technology International (WITI)
- New Moon Films Graphic Designer & Content Creator – Film & Multimedia Projects
- Freelance Design & Marketing Specialist, focusing on creating impactful resumes, distinctive branding solutions, engaging LinkedIn content, and comprehensive social media packages.