

Kshitij Ramchandra Khandagale

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EDUCATION

Michigan State University

Bachelor of Science in Computer Science | GPA: 4.0

Aug. 2026 – Dec. 2028

East Lansing, MI

- **Coursework:** Multivariable Calculus, Matrix Algebra I (Spartan Early Start)

Grand Rapids Community College

Middle College Program | GPA: 4.0

Jan. 2023 – April 2026

Grand Rapids, MI

- **Coursework:** Python I & II, C++ I & II, Java I & II, Calculus I & II, Linear Algebra

Kenowa Hills High School

High School Diploma | GPA: 4.007

Feb. 2022 – April 2026

Grand Rapids, MI

TECHNICAL SKILLS & RESEARCH INTERESTS

Research Interests: Generative AI (Image, Video, and World Models), Robotics (Embodied AI and Autonomous Vehicles), AI Alignment, Computer Vision, Machine Learning

Programming Languages: Python, JavaScript (Node.js), C++, Java

AI Agents & LLMs: Gemini API, Ollama, LM Studio, Agentic Workflows, Prompt Chaining, Function Calling, JSON Outputs

Data Analysis & ML: Pandas, NumPy, Matplotlib, Data Cleaning

Developer Tools: Git, GitHub, Codex, Cursor, Claude Code, FastAPI, Linux, Hyper-V, Jupyter Notebook, Creo Parametric

Programs & Training: Pathway to Research Program (MSU Summer 2026), RCR-CITI for Undergraduates 1

PROJECTS

Local VLM Caption Benchmark | *Python, Ollama, LaTeX*

Oct. 2026

- Built a reproducible benchmark comparing four local vision–language models on 120 images, generating 480 captions and collecting 1,920 blinded AI-judge evaluations.
- Analyzed caption quality, format compliance, processing time, GPU memory, and estimated energy use; produced visualizations and a $\text{\LaTeX}$ **research paper** documenting quality–efficiency trade-offs.

LocalPilot | **AI-Controlled Remote Linux Workstation** | *Python, FastAPI, Ollama, Linux*

Oct. 2026

- Built a developer tool that connects a locally running 27B AI model on Windows to an Ubuntu virtual machine, allowing users to assign tasks and access the Linux desktop from an iPhone.
- Enabled the AI to create files, run terminal commands, and interact with Firefox, with controls to review proposed actions, cancel tasks, and take over the desktop manually.
- Added saved task history, automatic connection recovery, and file backups; verified the system with 109 passing automated tests and six practical AI tasks.

Neural Network from Scratch | *Python, NumPy, MNIST, Matrix Algebra*

May 2026

- Implemented a neural network from scratch in Python using NumPy, including forward/backward propagation, ReLU, Softmax, and gradient descent.
- Trained and evaluated the model on the MNIST dataset using custom binary data loaders, achieving 92.35% classification accuracy on unseen test data.

AWARDS & HONORS

MSU Engineering 1st Year Scholarship (\$3,000 USD) | *MSU College of Engineering*

Merit Scholarship (\$2,000 USD) | *Grand Rapids Community Foundation*

President's List (6 Semesters) | *Grand Rapids Community College*