

# NEIL KAPUR

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Amherst, MA and Cleveland, OH

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## EDUCATION

**Amherst College** - B.A. Computer Science and Economics

*Expected Graduation: May 2025*

GPA: 3.9/4.0

**Relevant Coursework:** Algorithms, Data Structures, Computer Networks, Parallel and Distributed Computing, Operating Systems, Multivariable Calculus, Introduction to Statistics,

**Organizations:** Amherst Student Newspaper, Out in STEM (oSTEM), and Amherst Debate Society

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## EXPERIENCE

### MRI Software

Cleveland, OH

*Software Engineering Intern*

*May 2024 - Present*

- Assists in maintaining codebase used to manage REST API calls from partners, ensuring its security and compatibility with partner integrations
- Conducts thorough research into the codebase, providing the team with details on how current services are implemented so that they can be updated or enhanced
- Develops unit tests to ensure reliability of codebase after updates
- Carries out migration of MRI Home service from .NET Framework to .NET 8

### Amherst College

Amherst, MA

*Summer Undergraduate Research Fellow for Professor Lillian Pentecost*

*June 2023 - August 2023*

- Developed **Python** scripts to apply compression techniques (quantization and pruning) on nanoGPT large language model, reducing model size by 75 percent with minimal loss in accuracy
- Injected bit flips into model using Ares Fault Injection framework to test model fault tolerance
- Examined scholarly works on emerging embedded non-volatile memory technologies, neural network compression, and fundamentals of machine learning
- Selected to present research poster at 2023 IEEE International Symposium on Workload Characterization

*Student IT Help Desk Specialist*

*July 2022 - Present*

- Provides technical support and troubleshooting assistance to Amherst College community members through phone, email, and in-person support for laptops (Windows and macOS) and mobile devices
  - Manages and documents technical issues through ticketing system, routing tickets to appropriate departments for prompt resolution
  - Carries out IT tasks, including hardware installation, inventory management, and computer imaging
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## PUBLICATION

N. Kapur, A. Rangel and L. Pentecost, "CompressionGPT: Evaluating Fault Tolerance of a Compressed Large Language Model," in 2023 IEEE International Symposium on Workload Characterization (IISWC), Ghent, Belgium, 2023 pp. 232-234.

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## SKILLS

**Technical Skills:** C#, .NET, Java, Javascript, Python, HTML, CSS, PHP, C, Git, SQL, Microsoft Office, Stata, and R

**Spoken Languages:** English and Portuguese

**Other Skills:** Qualitative and quantitative data analysis, detail-oriented, teamwork, and problem-solving