Divyansh Shivashok

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EDUCATION

University of Massachusetts Amherst — Amherst, MA
Bachelor of Science in Computer Science and Mathematics; Major GPA: 3.80/4.0 *Expected Graduation: May 2025*

EXPERIENCE

Incoming AI/ML-focused Software Engineer Intern — June 2024 – August 2024
Microsoft — *Redmond, WA*

UMass Amherst Researcher — November 2023 – Present
Computer Graphics Lab at UMass Amherst — *Amherst, MA*
- Researching diffusion models for better user control over 2-D image generation.
- Working with UMass Amherst Computer Graphics Lab and Professor Evangelos Kalogerakis.

MIT CSAIL Researcher — May 2023 – Present
Computer Science and AI Lab (CSAIL) at Massachusetts Institute of Technology (MIT) — *Cambridge, MA*
- Researching 3D image diffusion models to improve generated object quality by developing alternative, improved SDS loss infrastructure.
- Collaborating with MIT PhD candidate Clinton Wang on literature review.

Machine Learning Engineer Intern — June 2023 – September 2023
Fisheye — *Maynard, MA*
- Created MLOps framework from ground up to analyze real-time data from embedded systems.
- Engineered generative AI apps for product proposal writing and code generation from company codebase.
- Achieved 70+% accuracy in air traffic classification using ML models and Big Data Preprocessing on sensor data.

Machine Learning Engineer Intern — June 2021 – August 2021
Quantiphi — *Marlborough, MA*
- Built an object detection model to detect and segment liver tumors from 3D CT scan volumes.
- Achieved 98% accuracy (0.98 DICE score) on LITS 2017 dataset using a 2D UNet with ResNet34 backbone.
- Deployed model on Google Cloud Platform to generate API calls to model.

PROJECTS

RouteAble | *Python, Tensorflow, PyTorch, ErgoBlockchain, JavaScript, React Native* — November 2023
- Launched unique full-stack app to crowd-source images of inaccessible areas, including Blockchain stack in 36 hours.
- Implemented two ML models: object similarity and image detection models to identify unique images of stairs, ramps, guard rails. First and only app with embedded tag generation model for disabled users.
- Won "Best Use of Github Award" sponsored by Major League Hacking (MLH) for unique architecture.

Machine Language Translation | *Python, Tensorflow, Keras, Anki* — February 2023
- Programmed English to Spanish and French language translation program from scratch with 95% accuracy.
- Trained a language model with Attention mechanism for accurate translation.

American Sign Language Translator | *Python, Open-CV, Keras, Tensorflow* — November 2022
- Developed three machine learning algorithms to convert sign language to English in real time with 97% accuracy.
- Recruited by Berthiaume Center for Entrepreneurship at HackUMass hackathon for start-up potential.
- Designed website back-end using Flask: http://zaranip.pythonanywhere.com/Home.html

ACHIEVEMENTS

John E. and Alice M. Flynn Scholarship and Dean's Merit Scholarship Recipient | *UMass Amherst*   2023
- Selected 1 / 1732 students for two awards for rigor, merit, and dedication to "Computing for the Common Good".

Two-time USNCO High Honors | *American Chemical Society*   2021, 2022
- Ranked top 50 out of 16000+ competitors twice in the U.S. National Chemistry Olympiad in 2021 and 2022.

Bristol Programming Competition | *Bristol College*   2022
- Secured first place in county-wide programming competition for outstanding project.

SKILLS

Languages: Java, Python, C, C++, JavaScript, HTML/CSS, Octave, LaTeX
Spoken Languages: English, Hindi, Intermediate in Sanskrit, Spanish, and Japanese
Developer Tools: Git, Google Cloud Platform, VS Code, Visual Studio, Anaconda, PyCharm, IntelliJ, Eclipse
Interests: Exercising (weightlifting), Reading (philosophy), and Chemistry (organic, physical, analytical)