Devang's Resume

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EDUCATION

University of Colorado Boulder *Aug 2025 – May 2028*
B.S. in Computer Science; B.A. Mathematics
Relevant Coursework: Algorithms; Software Development Methods & Tools; Data Science (Probability & Statistics)

Front Range Community College, A.S. in Computer Science *Jan 2024 – May 2025*
Relevant Coursework: Data Structures & Algorithms, Computer Principles, Assembly Language, Discrete Structures

CERTIFICATES & TECHNICAL SKILLS

Certificates: Meta Back-End Developer, Introduction to Generative AI Learning Path, Google Introduction to Image Generation
Programming Languages: Python, C++, Java, JavaScript, MATLAB, HTML, CSS, SQL
Frameworks & Tools: TensorFlow, PyTorch, MongoDB, Jupyter Notebook, Matplotlib, Lambda Labs, Git, OpenCV, Scikit-learn

WORK EXPERIENCES

University of Colorado Boulder **Boulder, CO**
Computational Neuroscience Researcher | Jupyter, Tensorflow, Pytorch, Matplotlib, Lambda Labs *Jan 2024 – Current*
- Led two independent AI research initiatives in computational neuroscience, designing and implementing end-to-end deep learning workflows for brain data synthesis and neurological disease classification across imaging modalities.
- Augmented neuro-oncology datasets by adding 15,000 synthetic MRI images using generative AI models to address data scarcity.
- Benchmarked CNN architectures, driving a 20% increase in diagnostic accuracy and achieving peak performance of 97.95%.

Headstarter AI **Remote**
Software Engineering Fellowship | HTML, CSS, React.js, MongoDB, SQL, Python *Jul 2024 – Sep 2024*
- Completed a competitive 7-week AI fellowship, building 5 machine learning projects and collaborating with over 300 peers.
- Collaborated in 5 AI hackathons, leveraging machine learning concepts and user feedback to build and deploy functional prototypes aligned with real user needs/hackathon guidelines.

RESEARCH PROJECTS

Synthetic Brain MRI Classification | TensorFlow, PyTorch, Matplotlib, Generative AI *Aug 2024 – Current*
- Benchmarked ResNet-50 and TinyViT classifiers, achieving up to 97.95% accuracy, and improved model accuracy through synthetic-real data integration. **Project selected for publication** in MIT URTC.
- Investigated how synthetic data can improve brain tumor classification using convolutional and transformer-based models across three experimental training variants. Technical Paper

IntoxDetect | Python, TensorFlow, GPT-4o, VGG16, Inception-ResNet-V2, Jupyter *May 2024 – Jan 2025*
- Trained and fine-tuned classification models on 10,000 facial images, achieving 83% and 82% accuracy in classifying inebriation.
- Developed a non-invasive AI system to detect alcohol intoxication from face and eye images, aimed at reducing motor accidents.

RESEARCH PUBLICATIONS

"Evaluating Optimal Real-to-Synthetic Data Ratios for Deep Learning Classification: A Stable Diffusion Approach to Brain Tumor MRI Generation" – Pending publication in IEEE Xplore; presented at the 2025 MIT Undergraduate Research Technology Conference (MIT URTC 2025).

"IntoxDetectV2: Comparative Analysis of CNNs and LLMs for Detection of Intoxication through Ocular and Facial Features Using Ensemble Learning"– Published in IEEE Xplore; presented at the 2024 MIT Undergraduate Research Technology Conference (MIT URTC 2024).

"Deep Learning for Non-Invasive Intoxication Detection: Ocular Analysis of Drivers Using CNNs and Quanvolutional Models" – Published in IEEE Xplore (indexed in EI Compendex and Scopus) from the 2024 4th International Conference on Artificial Intelligence, Robotics, and Communication (ICAIRC 2024)

AWARDS

Paper Selected – MIT Undergraduate Research Technology Conference (URTC) *Sep 2025*
2nd Place, Math & Computer Science – Colorado Science & Engineering Fair (CSEF) *Mar 2025*
Ralph Desch Technical Writing Award – Colorado Science & Engineering Fair (CSEF) *Mar 2025*
1st Place, Math & Computer Science – Corden Pharma Regional Science Fair *Feb 2025*
Paper & Poster Selected – MIT Undergraduate Research Technology Conference (URTC) *Sep 2024*