Nicholas Verzic

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EDUCATION

The University of Texas at Austin, Austin, TX — Expected Graduation: 05/2025
Bachelor of Science (3.7 GPA): Mathematics, Mechanical Engineering; Minor: Economics

SKILLS

Programming Languages/Software:
Advanced Python, C++, JavaScript, Java, R, MATLAB, GNU Octave, SolidWorks, Word Suite, Adobe Suite
Intermediate C#, Bash Scripting, C, Swift, Fusion 360, Unity
Packages/Libraries: Robot Operating System, PyTorch, TensorFlow, PySpark, Numpy, Scikit-Learn, Keras, Pandas, Prometheus
Hardware and Manufacturing: Mechatronics, Raspberry Pi, Arduino, 3D Printing, Laser Cutting, Injection Molding, Soldering

INTERNSHIPS/WORK EXPERIENCE

Meta (Menlo Park, CA)
Machine Learning/Software Engineer Intern — 05/24-08/24
- Developed audio recognition system for determining types of audio transformations present in files
- Trained vision transformer with PyTorch for use as audio classifier

Hewlett Packard Enterprise (San Jose, CA)
Software Engineer Intern — 05/23-08/23
- Scripted custom machine and database monitoring tools to enable comparison of Aruba ClearPass Policy Manager versions
- Performed code repairs of different CPPM versions' daemon processes

Learning Agents Research Group, The University of Texas at Austin (Austin, TX)
Undergraduate Researcher — 06/22-Present
- Led research project on novel technique for computer-vision detection and identification of elevator buttons/labels
- Developed spatial- and image-data processing scripts for live, accurate gaze detection pipeline given low-resolution video feed, https://repositories.lib.utexas.edu/bitstream/handle/2152/119140/TINN-THESIS-2023.pdf?sequence=1

Applied Research Laboratories, The University of Texas at Austin (Austin, TX)
Student Technician — 06/22-08/22
- Researched propagation of nonlinear acoustic waveforms through special materials
- Wrote MATLAB scripts to calculate waveform data propagation over time using differential equations

Stanford Institute for Human-Centered Artificial Intelligence's Digital Economy Lab, Stanford University (Stanford, CA)
Research Intern — 02/21-05/23
- Researched personal productivity trends; contributed to op-ed published to the MIT Technology Review titled "The coming productivity boom," under S-DEL Director, Professor Erik Brynjolfsson
- Programmed R scripts analyzing Californian demographic data for Stanford California 100 project

NASA Ames Research Center (Mountain View, CA)
NASA Intelligent Robotics Group Yearlong University Intern — 12/18-12/20
- Researched and developed custom multilateration algorithms for distributed sensor network using RF ranging in MATLAB
- Co-authored publication for IEEE 2020 Aerospace Conference, "PHALANX: Expendable Projectile Sensor Networks for Planetary Exploration," https://ntrs.nasa.gov/citations/20200002137

INDEPENDENT PROJECTS/ACTIVITIES

IDBizz iOS Application — 06/21-07/21
- Developed free iOS application for consumers to find and support business owners' identities and causes

ChildrenGiving.org Co-Founder, Lead Curriculum Designer — 07/09-07/23
- Delivered free programming and CS workshops to 1,000+ students through Microsoft (Stanford), and Tracy School District

PUBLICATIONS

- IEEE Aerospace Conference, 2020 publication, "PHALANX: Expendable Projectile Sensor Networks for Planetary Exploration"
- Acknowledgment in thesis, "Cross-Domain Adaptation and Geometric Data Synthesis for Near-Eye to Remote Gaze Tracking"
- IEEE International Conference on Intelligent Robots and Systems (IROS), 2024 publication, "Recovering Missed Detections in an Elevator Button Segmentation Task", gave Oral Presentation at conference

AWARDS & HONORS

- UT Austin University Honors recipient (all semesters)

UNIVERSITY EXTRACURRICULARS

- Autonomous Robotics Research Project Peer Mentor, Research Program Peer Mentor
- *University Clubs:* Design/Manufacturing Team Leader -- Longhorn Toy Factory, Active Guidance Team -- Texas Guadaloop