Jovin Ryan Joseph

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Objective

Sophomore engineering student with a keen interest in working with cutting edge nanomaterials and microelectronics, looking for opportunities in performing research and looking to gain deeper understanding of current challenges faced by industry and the world of academia.

Education

Texas A&M University | College Station, Texas *August 2022 – Present*
University Honors B.Sc Chemical Engineering, GPA 4.0 Expected Graduation, May 2026
Gathright Phi Kappa Phi Dean's Excellence Award Semi-Finalist
Summer Undergraduate Research Grant Recipient

Skills

Programming: Python, C++, R, HTML + CSS
Platforms: Windows, Linux
Hardware: Lenovo x86 and Intel x86-64 High Performance Computing Linux clusters
Software: Large-scale Atomic/Molecular Massively Parallel Simulator (LAMMPS), Open Visualization Tool (OVITO), Visual Molecular Dynamics (VMD), LaTeX(Overleaf) , OriginLab, Stopping and Range of Ions in Matter (SRIM), QuantumESPRESSO
Professional Organizations: American Institute of Chemical Engineers, Texas A&M Corps of Cadets
Communication: Research progress presentations, technical lab reports, poster presentations

Experience

Accelerator Laboratory Undergraduate Researcher *January 2023 – Present*
Texas A&M Department of Nuclear Engineering
Research group headed by the PI Dr. Lin Shao and PhD student Kenneth Cooper in the Texas A&M department of nuclear engineering
Research was conducted in the Accelerator Laboratory, a DOE NSUF user facility

- Received a $6,000 grant to model the fabrication of nanoporous graphene membranes
- Performed independent research and presented novel findings in the TAMU Summer 2023 Engineering Poster Session
- Created Python scripts and LAMMPS assets to assist in modelling
- Collected, analyzed, and visualized data using Python and OriginLab

Projects

Aerocheck *Spring 2023*
TAMUhack Team member
Team based project for the TAMUhack hackathon held at Texas A&M University

- Collected information on gas sensors, air quality indexes and industry requirements for air quality monitoring
- Curated a selection of MQ Gas Sensor modules to create the most effective Arduino gas sensor
- Compiled and created documentation related to the project and assisted in creating the final presentation

Machine Learning Model for Predicting Semiconductor Band Gap *Summer 2023 – Present*
Personal project

- Created a Python script to encode compositional and elemental data of compounds (turns input strings Of compound formula to generate a feature vector
- Created a Python script to query band gap and compositional information

Leadership or Activities

Squadron 11 Texas A&M Corps of Cadets | College Station, Texas *August 2022 – Present*
Scholastics and Career Readiness Corporal

- Learned effective communication and leadership skills
- Practiced working in high stress environments, learned effective time management, and cultivated a heightened attention to detail
- Coached underclassmen and helped in developing them for career and scholastic readiness

Relevant Coursework

Elementary Chemical Engineering (Honors), Elementary Chemical Engineering Lab, Design Process (Honors)