Gourav Pullela

gourav.pullela@gmail.com | +91 6281562126 LinkedIn | @gourav-pullela GitHub | gpullela

EDUCATION & HONORS

Indiana University Bloomington, Luddy School of Informatics, Computing, and Engineering (SICE) *June 2024*
Bachelor of Science in Intelligent Systems Engineering | **Concentration:** Computer Engineering | **Minor:** Mathematics
Scholarships & Honors: *Indiana Memorial Union Board Director Scholarship, Direct Admit to Luddy SICE Scholarship*

PROFESSIONAL SKILLS & INTERESTS

- **Languages:** C/C++, Python, Verilog/System Verilog, HDL, Java, Shell Scripting
- **Platforms:** MacOS (x86_64, arm64), Linux (RedHat, Ubuntu, L4T, Raspberry Pi OS), Microsoft Windows
- **Accelerated Computing:** OpenMP, MPI, CUDA C/C++, CUPy, JAX
- **Machine Learning:** PyTorch, TensorFlow, JAX
- **CAD/CAM:** SolidWorks CAD, Autodesk Fusion, Autodesk Eagle, KiCad, Ultimaker Cura, Prusa Slicer
- **Miscellaneous:** Microsoft Office Suite, SQL Server, Adobe Creative Cloud Suite
- **Interests:** Formula One, Golf, NFL, Photography, Digital Design

PROFESSIONAL EXPERIENCE

Undergraduate Instructor – Indiana University Bloomington **January 2021 – May 2021**
ENGR-E 111, Software Systems Engineering | Dr. R. Clint Whaley, Associate Professor of Intelligent Systems Engineering

- Received an invitation to the teaching staff after excelling in the course.
- Led labs with 20+ students, instructed in C-programming on Linux and UNIX-based environments.
- Collaborated with teaching staff to produce course material such as lab presentations and quizzes.

Undergraduate Instructor – Indiana University Bloomington **January 2020 – December 2020**
ENGR-E 101, Innovation & Design | Bryce Himebaugh, Associate Clinical Professor of Engineering

- Selected to join the teaching staff after displaying exceptional performance in the course.
- Presented course material, including Python programming on Linux-based microcontrollers, and certified students in the use of fabrication machines such as large format laser-cutters and FDM/SLA 3D printers.
- Leveraged Python and shell scripting to implement an automated grading system to streamline student coursework grading.

RESEARCH EXPERIENCE

IUBSAT | *Dr. Daniel Loveless, Dr. Alexander Gumennik – Senior Capstone Design Project* **September 2023 – May 2024**

- Collaborating with a team of senior engineering students to design the payload of a 2U CubeSat launched via high-altitude balloon to the upper stratosphere to image a total solar eclipse at totality.
- Leveraging SolidWorks and Stratasys Fortus FDM 3D printer technology to create and fabricate a novel CubeSat design with data and power buses printed in using conductive filament.

Conway's Game of Life in 3D | *Independent Project* **September 2020 – May 2023**

- Reimagined two-dimensional cellular automata and develop a three-dimensional, dynamically scaled version of Conway's Game of Life using C and the Open Multi-Processing (OpenMP) API.
- Analyzed statistical data to calculate simulation's moving growth/decay and population density.
- Implementing Python version using JAX, to run larger scale simulations with real-time visualization using OpenGL.

HPC Optimization in RSA Encryption | *Dr. Bibrak Qamar Chandio, Riley Campbell* **September 2019 – December 2019**

- Collaboratively implemented simplified RSA Encryption Algorithm using C and the Open Multi-Processing (OpenMP) API.
- Led benchmarking to compare the performance of single vs. multi-process environments with strong and weak scaling.

LEADERSHIP & ACTIVITIES

INgineering Club – Indiana University Bloomington **September 2019 – May 2024**
Student Representative

- Joined student-led departmental engineering club to collaborate with other members and leverage technical skills from our course curriculum to apply on collaborative engineering design projects.
- Leveraged fabrication lab technology to fabricate 3D printed lapel pins on a large-scale for 2020 Homecoming Parade.

Beta Chi Theta Fraternity – Bloomington, IN **September 2020 – September 2022**
Fundraising Chair & Public Relations Chair

- Elected by fraternity members based on leadership skills and experience with technology, social media, and fundraising.
- Devised event plans and fundraising strategies to find opportunities for the fraternity to expand its presence, while supporting causes such as *Beating Heart Disease (BHD)* and fundraising $1000 to support it.
- Collaborated with Fraternity Cabinet and developed social media marketing strategies to expand and improve digital presence.

Indiana Memorial Union Board – Indiana University Bloomington **September 2019 – September 2020**
Assistant Director of Marketing

- Elected to Assistant Director of Marketing position as chair of Design and collaborated with VP of Marketing.
- Led team of 10+ designers and optimized team's design workflow by streamlining design and implementation process.
- Led design campaigns (designed posters, flyers, event brochures, and event programs) for flagship events, such as '*An Evening with Anderson Cooper*' at Indiana University Bloomington.
- Increased exposure to the Indiana Memorial Union Board on social media and through tabling at in-person events.