Aragya Goyal

Linkedin: linkedin.com/in/aragya-goyal/ Mobile: +1-610-615-7007
Github: github.com/Aragya1642 Email: agoyal1642@gmail.com

Education

- **University of Pittsburgh** Pittsburgh, PA
  B.S. - Computer Engineering (Autonomous Systems Focus); **GPA: 3.99** *August 2022 - April 2026*

Skills

- **Languages**: Python, C++, ARM Assembly
- **Technologies**: Linux, ROS, Github, Solidworks, MATLAB, Microsoft Products, Arduino, Raspberry Pi, OpenCV
- **Manufacturing**: Milling, Soldering, Laser Cutting, General Shop Tools

Relevant Experience

- **Carnegie Mellon University - Robotics Institute (Biorobotics Lab)** Pittsburgh, PA
  Undergraduate Researcher (Part-Time) *April 2023 - Present*
  - **Underwater Snake Robot**: Created project based course using Unsupervised learning and natural language processing.
  - **Apple's E-Waste Recycling Project**: Created tutorial for Q-learning RL algorithm and concepts.
- **Society of Astronautics and Rocketry** Pittsburgh, PA
  Chief Engineer (Student Led Organization) *August 2022 - Present*
  - **Full Rover Integration**: Created project based course using Unsupervised learning and natural language processing.
  - **Robotic Hand**: Created tutorial for Q-learning RL algorithm and concepts.
- **FIRST Robotics** Exton, PA
  Team Captain/Design Lead (Student Led Organization) *January 2023 - May 2023*
  - **Project Course - Find Movie Similarity from Plot Summaries**: Created project based course using Unsupervised learning and natural language processing.
  - **Tutorial - Introduction to Reinforcement Learning**: Created tutorial for Q-learning RL algorithm and concepts.
- **VEX Robotics** Royersford, PA
  Team Captain (Student Led Organization) *January 2023 - May 2023*
  - **Project Course - Find Movie Similarity from Plot Summaries**: Created project based course using Unsupervised learning and natural language processing.
  - **Tutorial - Introduction to Reinforcement Learning**: Created tutorial for Q-learning RL algorithm and concepts.

Technical Projects

- **STM-32 Elevator Simulator (ARM Assembly, PCB Design, Project Integration)**: Designed and Implemented software architecture in ARM Assembly to operate a physical elevator simulator PCB. (Link: https://github.com/Aragya1642/STM32_Elevator_Project/tree/master)
- **Custom Cane (Human Centered Design, Solidworks, Presentation)**: Designed and manufactured a Walker-Cane Fusion to make bathrooms more accessible for wheelchair users. The project won first place at the Senior Design Expo within its category. (Link: https://tinyurl.com/CustomCane)
- **Formula SAE E-Brake Bias**: Designed and developed an award winning e-brake bias system for a formula style racecar, utilizing Solidworks and 3D printing technology to enhance performance and usability. (Link: https://tinyurl.com/ebrakeb)
- **String Art Generator and Optimizer**: Developed an innovative string art optimization tools and GUI using Python programming to improve upon existing string art generators. (Link: https://github.com/Aragya1642/OptimizationOfStringArt)
- **Silicon Prosthetic Hand (Research, Solidworks)**: Designed and Manufactured prototype prosthetic hand with silicone soft actuators and tested with human participants for AP Research Project. (Link: https://tinyurl.com/myprosthetic)

Honors and Awards

- Awarded title of Intel Software Innovator - May, 2019
- Second Runner's Up at TCS EngiNx Engineering Project Innovation Content - September, 2018
- Runner's Up at Facebook Developers Circle Hackathon - August, 2017

Volunteer Experience

- **Community Lead at Developer Student Clubs NSEC** Kolkata, India
  Conducted online and offline technical & soft-skills training impacting over 3000 students. *Jan 2019 - Present*
- **Event Organizer at Google Developers Group Kolkata** Kolkata, India
  Organized events, conducted workshops and delivered workshops reaching over 7000 developers. *Jan 2018 - Present*

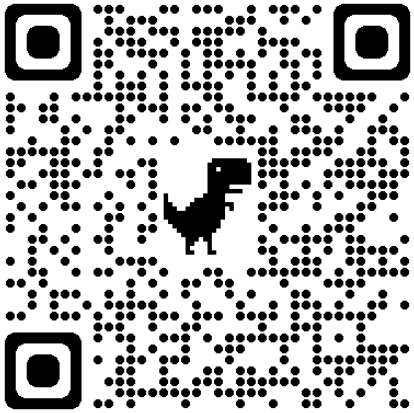

Figure 1: Caption for image 1

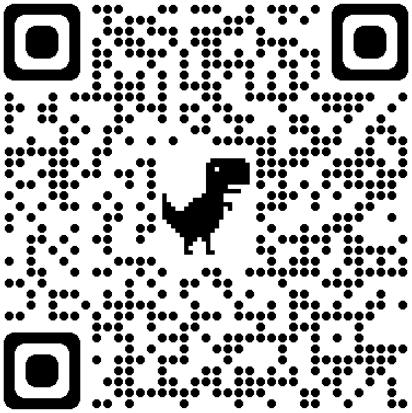

Figure 2: Caption for image 2

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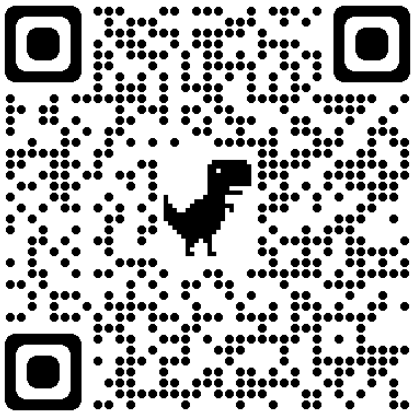

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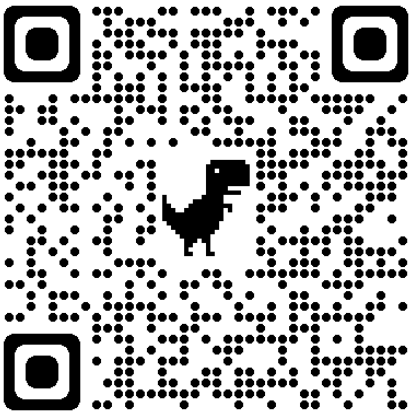

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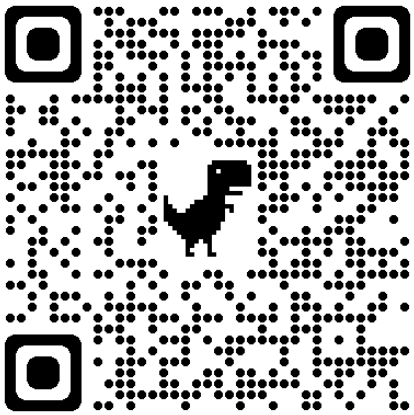

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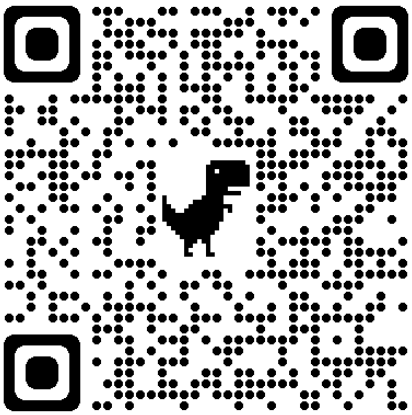

Figure 6: Caption for image 4

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