Ramani Tyagi

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Education

University of Michigan September 2019 - April 2022
B.S.E in Computer Science, GPA: 3.49/4.00
- Coursework: Intro to Computers and Programming, Data Processing, Programming and Intro Data Structures

Experience

University of Michigan September 2020 - present
Undergraduate Research Assistant at Engineered Cellular Microenvironments Lab
- Optimizing antibacterial and antithrombotic polymeric surfaces to prevent infections and blood clotting in healthcare facilities
- Data analysis and modeling of characterizations on polymers (e.g. Brillouin light spectroscopy)

University of Saskatchewan September 2018 - December 2018
Academic Intern
- Used Taguchi method to optimize holding time, heating rate and temperature for high yield and specific surface area of activated carbon for post-combustion carbon capture applications
- Performed TGA analysis on biochar samples and implemented a pyrolysis kinetics model using MATLAB
- Participated in lab seminars and presented on project design and project completion

Projects

Computer Vision (C++, September 2020)
- Content-aware image resizing program implementing seam carving to remove least important pixels

Euchre (C++, October 2020)
- Simulator for a popular card game where a user may play against other users or against the computer

Extracurricular Activities

- Global CO2 Initiative Undergraduate Association October 2020 - present
  Vice President. Building the association's structure for a successful launch Winter 2021. Designing the club's projects and activities, including lectures, corporate sessions, community outreach, etc.
- Engineering Research Symposium Planning Committee August 2020 - present
  Designed poster template undergraduate students will use to present at the symposium.
- College of Engineering Peer Mentor Program August 2020 - present
  Build relationships with and guide engineering students through their first year. Facilitate mentor/mentee events with other mentor groups.
- Integrated Engineering Program September 2019 - present
  Currently designing an automated fish tank IEP project for next year.
  Learned engineering principles and collaborated with a team to design and build a coffee maker using those skills.

Skills

- **Programming Languages and Frameworks:** MATLAB, C++, Python, Excel, SQL