VRUNDA TOL

(805) 284-1015 | vrundatol@bren.ucsb.edu | LinkedIn | Santa Barbara, CA

EDUCATION

Master of Environmental Science and Management (Expected June 2025)
Bren School of Environmental Science & Management – University of California, Santa Barbara (UCSB)
Specializations: Business and Sustainability, Energy and Climate
Sustainability Leadership: Career Development Officer, Net Impact; Board Member, Bren Energy Club
Highlighted Coursework: Energy Technology; Life Cycle Assessment (LCA); Environmental Modeling; Carbon Accounting; Cost Benefit Analysis; Advanced Data Analysis; Sustainable Product Development

Master of Science in Chemistry (June 2019)
Bachelor of Engineering in Electrical & Electronics Engineering (June 2019)
Birla Institute of Technology and Science, Pilani (BITS-Pilani), Pilani, India
Fellowship: INSPIRE from Department of Science and Technology, Govt. of India

MASTER'S GROUP PROJECT EXPERIENCE

Understanding water and energy tradeoffs for data center cooling in California (04/24–Present)
Client: Equinix | Role: Data Manager | Deliverables: Dashboard, Report, and Presentation

- Conducted literature review and developed a methodology to quantify the water used for electricity generation for 11 electricity sources across 5 utilities in California.
- Provided forward-looking recommendations to the client based on scenario analysis for a combination of grid mixes and cooling types to ensure responsible resource use for future data centers.

PROFESSIONAL EXPERIENCE

Circulor Inc., Remote (06/24–09/24)
Customer Implementation Intern | Clients: Tesla & Elemental Advanced Materials

- Implemented clients' digital product passports, material traceability maps, and carbon emissions tracking.
- Developed metrics to assess the reported GHG emissions, waste, water usage, and PCFs of Tesla's suppliers based on 22 sustainability reports, providing recommendations for decarbonization strategies.
- Drafted RFPs for EV battery suppliers, miners, and recyclers to comply with EU battery regulations.

Intel, Bangalore, India (07/18–08/23)
Structural Design Engineer (07/19–08/23)

- Collaborated across teams to achieve high-frequency targets for 4 GPU projects on 7nm & 5nm Silicon with Static Timing Analysis on large data sets in all semiconductor design and production stages.
- Explored energy efficiency and circularity innovations at the Intel India Sustainability Lab.

Graduate Technical Intern (07/18–06/19)

- Evaluated delay correlation between Synopsys design construction tool and timing sign-off tool to ensure early detection and fixing of 80% of violations in the design using statistical on-chip variation.

ADDITIONAL MASTER'S PROJECT EXPERIENCE

- **GHG Emission Calculations and Recommendations for Toad & Co (10/24–12/24).**
- **Cost-Benefit Analysis of a Nuclear Small Modular Reactor for a Data Center (10/24–12/24).**
- **Life Cycle Analysis of Aluminum Cans, exploring two end-of-life scenarios (01/24–03/24).**

SKILLS, FRAMEWORKS, & CONFERENCES

Technical: R, Shiny, Quarto, Java, MATLAB, C, Excel, VBA, Synopsys VLSI, EJ Atlas, WRI Aqueduct, LCA Sphera
Sustainability Frameworks: GHG Protocol, TCFD, SBTi, CDP, IFRS S2, SASB, GRI, CSRD
Conferences: VERGE, Oct 2024; SEMICON West, Aug 2024; Battery Brunch – Volta Foundation, Feb 2024