Aini Palizhati

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EDUCATION

Carnegie Mellon University *May 2022*
Doctor of Philosophy-Chemical Engineering
- PPG Graduate fellowship
- Phillips and Huang Family Fellowship in Energy

North Carolina State University *May 2017*
Bachelor of Science-Chemical Engineering; Minor- Biotechnology
- Graduated ***summa cum laude,*** department commencement student speaker

PHD RESEARCH

Thesis Summary: Design automated materials discovery strategies for renewable energy applications. These strategies incorporate domain knowledge of theoretical chemistry, machine learning, data analytics, and software engineering. Collaborate with experimental partners and provide high-value candidate catalysts using the developed strategies.
Featured Work: Open Catalyst Project (opencatalystproject.org), GASpy (github.com/ulissigroup/GASpy).

EMPLOYMENT HISTORY

August 2022 – present	**Boston Consulting Group** management consultant
May-September 2021	**Facebook Artificial Intelligence (FAIR)** Research Intern
June-August 2020	**Toyota Research Institute** Accelerated Materials Design and Discovery Intern
May-August 2017	**Fujifilm Diosynth Biotechnologies,** Process Optimization Intern
August 2014-May 2017	**North Carolina State University**, Beisel Lab, Undergraduate Lab Assistant
May-August 2016	**Merck & Co.** Project Management Intern
May-August 2015	**PotashCorp** Process Development Intern

PROFESSIONAL EXPERIENCE

Boston Consulting Group Management Consultant *Atlanta, GA, August 2022-present*
- Team of three that developed a next generation revenue strategy for an international freight and package company, the strategy received its first unambiguous win on a ~40 million dollars opportunity.

Facebook Artificial Intelligence (FAIR) Research Intern *Menlo Park, CA, May-August 2021*
- Applied state-of-the-art graph neural network models on catalysis data, identify their current bottlenecks, and improve their prediction ability.

Toyota Research Institute Accelerated Materials Design and Discovery Intern *Los Altos, CA, June-August 2020*
- Designed a new agent-based framework for materials discovery that combines multi-fidelity modeling and sequential learning to lower the number of expensive data acquisitions while maximizing discovery.

Fujifilm Diosynth Biotechnologies Process Optimization Intern *Durham, NC, May-August 2017*
- Optimized bioreactors performance by determining oxygen mass transfer coefficient (kLa) for bioreactors with various sizes.
- Created a new simulation program for the bioreactors scaling-up process for the Research & Development department using the design of experiments methodology and kLa findings.

North Carolina State University, Biesel Lab, Undergraduate Lab Assistant *Raleigh, NC, August 2014-May 2017*
- Created an expression vector encoding for the methyltransferase enzymes using restriction cloning technique to mimic Clostridium difficile R20291 methylation patterns in E. coli

Merck & Co. Project Management Intern *Raleigh, NC, May-August 2016*

- Coordinated and set up Merck's first global case competition at NC State University, focused on IT security in healthcare. Facilitated communications between Merck executives, university staff, and business schools.
- Developed a data analytic framework to review Merck's IT infrastructure and identify area of improvements.

PotashCorp Process Development Intern *Aurora, NC, May-August 2015*

- Developed water balance around the phosphoric acid plant to achieve 15% reduction in acid loss.
- Updated process flow diagrams and verified raw materials lists for animal feed manufacturing processes in preparation for conducting a Hazard Analysis and Critical Control Point (HACCP).
- Collected and analyzed information to determine the best practice for achieve industry leading safety protocols, which resulted in the success of a plant audit for Safe Feed/ Safe Food (FSC 36 standard) certification.

LEADERSHIP

President Toastmaster International, District 13 Bakery Square Public Speaking Club *June 2020-April 2022*

- Oversee club operations, lead the executive team to establish plans for club growth.

Secretary, Carnegie Mellon Ballroom Dance Club *April 2018-August 2019*

- Recruited and managed memberships of over 200 people, and was responsible for campus-wide publicity.

Various Positions, American Institute of Chemical Engineers - NC State Student Chapter *April 2014- April 2017*

- **President:** Managed 15 board members and oversaw club operations. Received national outstanding student chapter.
- **Vice President:** Brought in over $10,000 sponsorship and set up over 20 company networking sessions for members.
- **Secretary:** Recruited and managed memberships of over 300 people, developed a new club website.

ADDITIONAL EXPERIENCE & INVOLVEMENT

Boston Consulting Group *November 2022-present*

- Women@ BCG Atlanta office social committee

Carnegie Mellon University Teaching Assistant *Fall 2018-Spring 2019*

• 06621 Fluids Dynamic
• 06625 Chemical and Reactive System Engineering

North Carolina State University, Teaching Assistant *Fall 2016-Spring 2017*

• CHE 225 Intro Chem Engr Analysis
• CHE 315 Chem Process Thermodynamic