

## EDUCATION

**University of Utah**, M.S. in Mining Engineering, GPA 3.8/4.0 Salt Lake City, UT Aug 2012 – Jul 2014  
Received Capacity Building Research Scholarship with full-tuition and stipend for two years (\$84K); Public relations officer for Indian Student Association of Utah; International Student Ambassador; Member of Utah Tennis Club

**Indian Institute of Technology**, B.Tech. in Mining Engineering, GPA 7.4/10 Dhanbad, India Jul 2008 – Jun 2012  
Amongst the top 2% candidates in India to qualify the prestigious IIT-Joint Entrance Examination; Member of university soccer team; Editor and graphic designer for university newsletter; Internship at Tata Steel from May 2011 to July 2011

## EXPERIENCE

**Centers for Disease Control and Prevention (CDC) | Mining Engineer** Pittsburgh, PA Jul 2015 – Present

- ◆ Subject matter expert for mine safety and health in the U.S. government, working in natural gas, coal, and limestone commodities; Principal investigator for the project on reduction of respirable contaminant exposure to workers
- ◆ Published 19 scientific articles, presented at 12 international conferences, and chaired 3 technical sessions at energy conferences; Cited by leading researchers around the world including Australia, China, India, Poland, and the U.S.
- ◆ Represented U.S. government in bilateral talks with the Colombian government on improving occupational safety and health; Visited Bogota in response to more than 300 fatalities in 2018 in the mining and gas industry
- ◆ Overseeing and managing research grants and government contracts (\$1.4M) awarded to universities and private companies
- ◆ Drafted strategic plan and environmental impact statement submitted to Congress for acquisition of land and development of an underground laboratory for explosions research in Mace, WV; Congress appropriated \$25M for the project
- ◆ Collaborated with Dept. of Energy, Dept. of Labor, and mining/gas companies such as EQT and CONSOL Energy to develop new federal and state regulations for co-existence of gas wells and mines; impacts 1000+ unconventional wells
- ◆ Analyzed over 100 terabytes of seismic data from limestone mines using OpsPy python library; invited to Canada to share my work at the 8th ESG international micro-seismic symposium

**Prairie State Generating Company | Ventilation Engineer** Marissa, IL May 2014 – Jul 2015

- ◆ Spearheaded a cross-functional team of 7 to design and manage the ventilation airway network spanning over 150 miles, essential for the health and safety of over 200 miners working in the mine
- ◆ Developed and implemented predictive simulation models for improved planning and design; increasing production from 4M tons p.a. to 5.9M tons p.a. and decreasing number of regulatory citations by 25%
- ◆ Evaluated the existing long-term mine plan and found multiple issues; optimized and developed a new plan, saving \$25M in CAPEX and \$400K p.a. in OPEX; presented to the C-Level executives from 9 public utility agencies in the Midwest U.S.

**University of Utah | Research and Teaching Assistant** Salt Lake City, UT Aug 2012 – May 2014

- ◆ Implemented operations management and genetic algorithm to develop a software for optimal placement of booster fans; improved the location accuracy by 60% and reduced the computation time by several days
- ◆ Drafted a research proposal and secured \$300K funding for R&D to control spontaneous combustion in underground mines
- ◆ Teaching assistant for the finance, hydraulics and ventilation courses; awarded the best teaching assistant award

## HONORS

**Excellence in Government Award (EEO Diversity and Inclusion)** Pittsburgh, PA May 2018

Recognized by the Pittsburgh Federal Executive Board for employee outreach and community service efforts at the CDC, nominated among the 20,000 Federal employees in the Greater Pittsburgh region

**CDC NIOSH Diversity Star Award** Washington, DC Jul 2017

Awarded for contributions towards enhancing diversity efforts at CDC, by mentoring junior/senior staff, creating opportunities for others to grow, obtaining public/private perspectives, and bringing all cultures together with energy and enthusiasm

## LEADERSHIP

**Pittsburgh Coal Mining Institute of America (PCMIA) | Board of Director** Canonsburg, PA Jul 2019 – Present  
Organized the 133<sup>rd</sup> PCMIA annual conference with more than 250 attendees. PCMIA provided more than \$10,000 scholarships to high school and university students. Established in 1887, among the oldest and most prestigious organizations in mining

**Society of Mining, Metallurgy, & Exploration | Young Leaders Committee** Denver, CO Dec 2015 – Present  
Led professional and career development programs such as webinars, leadership presentations, and field trips for engineers

**Emerging Leaders Alliance** Falls Church, VA Nov 2016  
Selected in top 80 young leaders in the world from leading science-based organizations to attend the leadership conference