Jun Yao Wang

Mining Engineer-in-Training

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EDUCATION

Bachelor of Applied Science in Mining Engineering, Minor in Data Science May 2025
University of British Columbia Vancouver, BC, Canada

SKILLS

Mining Engineering: Underground and Surface Mine Planning, Mine Design, Mine Operations, Rock Mechanics, Soil Mechanics, Fluid Mechanics, Tailings, Groundwater Hydrology, Mineral Processing

Data Science: Machine Learning, Discrete Optimization Modelling, Relational Databases, Statistical Inference

Programming: Python (scikit-learn, pandas), SQL, R, C++, MATLAB, GitHub, VBA

Certifications: Engineer-in-Training (EGBC)

WORK EXPERIENCE

Mining Engineer Jan 2026 – Present
United States Steel Corporation Hibbing, MN, United States

- Planned the sequencing of shovel movements by collaborating with engineers, operators and geologists to achieve a consistent ore blend and production rate of iron ore pellets
- Designed roads and ramps on Minesight3D to optimize material haulage for the mine forecast
- Managed the placement and routing of waste material towards dumps or construction projects in-pit
- Conducted daily field tours to monitor plan compliance

Underground Mining Engineer Co-op Jan 2024 – Aug 2024
Ascot Resources Ltd. Stewart, BC, Canada

- Drafted the design of development drifts, underground rehabilitation standards, backfill procedures and longhole production prints using Deswik for the operation of a junior underground gold mine
- Conducted ventilation surveys and formed plans to monitor and achieve adequate CFM and gas levels
- Conducted pull tests to monitor and assess ground support and send out weekly geotechnical reports
- Assisted in underground surveying using Trimble to install control points and pick up headings, bridging the mine plan with mine operations
- Restructured KPI database management from Excel to Power BI and SQL for effective data visualization

Mining Engineer Co-op May 2022 – Aug 2023
Suncor Energy Inc. Fort McMurray, AB, Canada

- Planned daily oil sands excavation on MicroStation by assessing operational and geological factors for a fleet of 9 electric rope shovels and hydraulic shovels, achieving target production of 18000 tph
- Designed and monitored the construction of temporary and semi-permanent haul roads with operators and optimized haul efficiency by planning and designing ramps to reduce travel distance
- Planned and monitored placement for waste dumps and tailings dyke construction using Wenco
- Collaborated with field leaders and geologists to monitor plan compliance from daily field tours

RESEARCH EXPERIENCE

Undergraduate Mineral Processing Student Researcher May 2021 – Aug 2021
Norman B. Keevil Institute of Mining Engineering Vancouver, BC, Canada

- Conducted comminution tests (supervised by Dr. Bern Klein and PhD student) on ore samples with the piston-press and high-pressure-grinding roll to determine if their production rate is related and scalable
- Operated crushers, sieves, and splitters on to prepare mineral samples for feed into the machines
- Modeled the effects of particle size and energy draw of the high-pressure-grinding roll using MATLAB

TECHNICAL PROJECTS

Open Pit Mine Design Event Mar 2023 – Mar 2025
Canadian Mining Games

- Designed the brownfield pit expansion for a copper-molybdenum deposit from block model, geotechnical, fleet, mill and financial parameters that extend the mine life by 20 years achieving an NPV of $4M
- Designed blasted footwall pit shells as well as dump and reclamation to accommodate production
- Scheduled production and evaluated feasibility of upgrades towards mill recovery and throughput
- Won first place in the event for two consecutive years (2024, 2025)

Capstone Project: Mine-to-Mill Blend Optimization at Highland Valley Copper Mine Sep 2024 – Apr 2025
Teck Resources Ltd.

- Created a mixed-integer linear program on Python to determine an optimal allocation of dump loads to different crushers based on ore hardness, haul distance and queue time to maximize production, report here
- Utilized machine learning to establish a relationship between parameters for the objective function

MATH 441 Combinatorial Optimization Project: Forming the Best Basketball Team Sep 2024 – Dec 2024
University of British Columbia

- Developed variations of knapsack combinatorial optimization programs that form an ideal NBA team by choosing players that either maximize team net rating or player efficiency rating or minimize weighted distance of NBA stats compared to league leaders, report here
- Obtained team selection of players with 36% average higher performance statistics

CPSC 330 Applied Machine Learning Mini-project: Predicting Credit Card Default Sep 2024 – Dec 2024
University of British Columbia

- Developed different machine learning models and tuned their hyperparameters to obtain a 75% accuracy in predicting credit card default

LEADERSHIP AND VOLUNTEERING

Captain Sep 2022 – Apr 2025
UBC Mining Games Team University of British Columbia

- Represented UBC at the annual Canadian Mining Games, a national intercollegiate mining engineering competition, and won first place overall for two consecutive years (2024, 2025)
- Managed a team of 16 members to represent UBC at the 35th (2025) Annual Canadian Mining Games held in Quebec City through obtaining sponsorships, planning travel, and preparing/competing in events
- Competed in the Open Pit Mine Design event and won two consecutive years (2024, 2025)

Council Member – Clubroom and Clothing Representative Sep 2023 – Apr 2025
UBC Mining Undergraduate Society University of British Columbia

- Designed and sold merchandise for the UBC mining engineering department to promote departmental spirit
- Maintained and upgraded resources for the department clubroom to facilitate learning and professionalism
- Defended the interest of UBC Mining Engineering undergraduate students by initiating a proposal and a petition to protest the shrinking of the clubroom space in new building plans

AWARDS

Eldridge Memorial Prize – UBC graduating student with the highest standing in mining engineering May 2025
1st Place Canadian Mining Games – UBC won Canadian Mining Games two straight years Mar 2024, Mar 2025
1st Place Open Pit Mine Design – won individual event two straight years Mar 2024, Mar 2025
Patricia M. Mohr Award in Engineering – top 25% of UBC Applied Science and high career ambition Nov 2024
James Marlow Scholarship in Mining Enginering – UBC achievement for proficient mine design Nov 2024
Don Lindsay Teck Award in Mining Engineering – UBC Mining academics, leadership, extra-curricular Oct 2024
CMIEF Scholarship – awarded by CMIEF for industry commitment May 2024
Undergraduate Student Research Award (USRA) – awarded by NSERC to work on research project Jul 2021