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# Claire Elizabeth Kincaid

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## Profile

Graduate Earth Resources Development Engineer, specializing in novel mining equipment, mine design, and mine management, with an excellent understanding of fleet management and communications systems. Intrinsicly motivated learner with a people-based, data-driven approach to solving problems, seeking to build a well-rounded technical background in mining engineering.

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## Education

- Colorado School of Mines**, Golden, CO *Est. Graduation: May 2021*
- Candidate for Master's of Science in Earth Resources Development Engineering
  - Cumulative GPA: 3.80
- Olin College of Engineering**, Needham, MA 2015 - 2019
- Bachelor's of Science in Mechanical Engineering; Grand Challenge Scholar
  - Cumulative GPA 3.67
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## Work Experience

- Valhalla Engineering Group**: Mechanical EIT; Englewood, CO, US *Jun 2020 - Present*
- Designed and analyzed HVAC and plumbing systems with the mechanical engineering team
  - Assisted various engineering and architecture teams in drafting and administrative tasks
  - Trained in project and model management
- Komatsu America Corp**: Graduate Applications Engineering Intern; Multi-location, US *May - Aug 2019*
- Consulted on equipment needs for various customers, reported on productivity and OPEX
  - Consulted on equipment use for customers onsite at various mines in the Southeast United States.
  - Assisted test engineers in installing and testing new modifications to equipment prototypes
- Resolution Copper Company**: Mining Engineering Intern; Superior, AZ, US *May - Aug 2018*
- Conducted 2018 Joint Analysis Study and investigate tunnel wedging and factor of safety
  - Reviewed and logged Magma data to establish baselines for environmental management
  - Reviewed 2018 Tunnel Boring Machine state of the industry, reported on business opportunities
- TE Connectivity**: Product Engineering Intern; Harrisburg, PA, US *May - Aug 2016*
- Designed and executed experiment for change of raw materials for impact manufacturing
  - Interfaced with customers and engineers to solve problems and meet needs of new customers
- Olin College of Engineering**: Advanced Mathematics Teaching Assistant; Needham, MA, US 2016 - 2019
- Assisted in teaching application and analysis of advanced mathematical principles to circuitry, robotics, computer science, and mechanical design.
  - Assisted in curriculum development and iterative improvement of overall course structure
  - Discussed student and class progress, understanding, and problems with instructors to assist in understanding of teaching effectiveness and areas of importance
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## Research and Project Experience

- Graduate Thesis on Diversity & Inclusion in the Mining Industry** *2019 - Present*
- Determine the current state of diversity and inclusion in the mining industry
  - Determine Diversity & Inclusion best practices in the mining industry via program case study
- SR-Hybrid and Electric Vehicles for Underground Mining** *2020 - Present*
- Review testing data for several prototype SR-Hybrid and Battery Powered LHDs
  - Refine numerical model to calculate efficiency and fuel consumption of prototype LHD models
  - Create user interface to enable sales engineers and customers to calculate efficiency and productivity
- Senior Engineering Capstone: Gates Foundation Fecal Sludge Conveyance** *2018 - 2019*
- Design conveyance solutions for pit latrine emptying systems in Sub-Saharan Africa and South Asia.
  - Manage team of five, facilitate inter and intra team, advisor, and industry sponsor communication
- Senior Design Capstone: QueenTech Gari Processing** *2018 - 2019*
- Design and improve upon existing mini graters and presses to aid small scale Ghanaian gari production
  - Interface with operators on the ground to maintain and track machine use and business progress
- Structural Geology and Fault Mapping** *Jan - May 2018*
- Analyzed pictorial dataset of lignite mine near Mavropigi, Greece
  - Generated maps and cross sections to create a three-dimensional picture of underlying faults
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## Core Competencies

**CAD/CAM**: SOLIDWORKS, PDM, AutoCAD, Civil 3D, Revit, ONSHAPE, PTC Creo, FEA/FEM, SAP  
**Mining and Professional Software**: Vulcan, PCBC, MS3D, AmpL  
**Programming**: Excel Solver, MATLAB, Mathematica, LaTeX, Python, R, MiniTab, Tableau, Arduino C, COMSOL  
**Welding and Machining**: MIG, TIG, Oxy / Ace, Manual Mill, 3-axis CNC Mill, Lathe, Casting, Forging, Abrasives  
**Language**: Intermediate-Advanced Japanese, Beginning Spanish, Fluent English  
**Soft Skills**: Presentation & Reporting, Cultural Flexibility, Direct & Indirect Management, Collaborative Teaming