

PERSONAL INFORMATION

Name: Duah Philip

Address: Korngasse 8, 09599 Freiberg, Germany

Date of Birth/-Place : 12. September 1992, Kumasi, Ghana

Telephone: +491701848356

Email: philipduah1992@gmail.com

Languages Spoken: English

German

Website: duah-philip.github.io



ABOUT ME

Exceptional Mining Engineering student and sustainability-minded high performer with significant leadership skills, a passion for hard work, excellent writing, communication, and organizational skills. I am interested in industry applied research that will disentangle the complex interaction between Mining, Sustainability, Technology and Business. Highly driven and proactive individual who thrives in a fast-paced environment. Fast learner with a willingness to learn new things.

EDUCATION

January, 2023	Missouri University of Science and Technology,USA Ph.D. Mining and Mineral Engineering
November, 2022	TU Bergakademie Freiberg, Germany M.Sc. Sustainable Mining and Remediation Management
October, 2022	Montanuniversität Leoben, Austria Blended Intensive Program (Water:Tool and Resources) Part of M.Sc. Degree
January, 2020	European Institute of Innovation and Technology (EIT) Circular Economy and Sustainable Business Part of M.Sc. Degree
June, 2016	University of Mines and Technology, Tarkwa, Ghana Bachelor (First Class Honours), Geomatic Engineering

PROFESSIONAL EXPERIENCE

| RESEARCH

January, 2022 – April, 2022	Missouri University of Science and Technology, Missouri, USA Visiting Research Scholar
	<p>✓ Achievements:</p> <ul style="list-style-type: none">• Investigated sustainability disclosures made by mining companies• Software implementation and advanced modelling to compare products for internal or external communication, and as a basis for environmental product declarations

- Researched land use modelling methodologies

March, 2021- November, 2021

Helmholtz Institute Freiberg, Freiberg, Germany
Scientific Assistant



Achievements:

- Advanced data analysis in the R programming language
- Wrote a computer program for Mineral crushing process modelling using statistical learning algorithm

| TEACHING

April, 2019 -April, 2020

Tutor for selected courses in Sustainable Mining Program in collaboration with University International Centre

Courses:

- Mine Water: Chemistry and Treatment
- Management and Finance of Mining Operations along the Life Cycle
- Project and Contract Management
- Mine Water: Hydrogeology and Modelling

| INDUSTRY

July, 2020- September, 2020

General Atomics Europe GmbH [Umwelt – und Ingenieurtechnik GmbH, Dresden]
Intern



Achievements:

- Supported business development with intensive research to identify key international iron ore mining companies based on standard criteria for validation and development of a novel B2B technology focusing on Canada, USA, Australia and Brazil
- Created a database of selected raw materials and mines including a presentation of results on potential customers for a company product under development for future strategic consulting and sales
- Described relevant parameters including general geology, environment, finances and production process of selected mining companies in Canada, USA, Australia and Brazil

September, 2016-August, 2017

Kinross Gold Corporation [CGML], Chirano , Ghana
Trainee



Achievements:

- Supported mine planning, design and execution of mine operations at production sites
- Collaborated between various operations and teams to plan and update project designs in a timely manner
- Maintained close working relationships with operations, provided technical support, collected and prepared performance reports and benchmarks for sites

June, 2015 – July, 2015

Kinross Gold Corporation [CGML], Chirano , Ghana
Intern

- Supported technical services in both open pit and underground mines

SKILLS |

- Microsoft Software Package: **Office, Excel, Microsoft Project Professional**
- Programming: **R, SQLite, Git/GitHub**
- Mining Software: **Surpac, Maptek Vulcan, Talpac 3D, HAULSIM**
- Software and Analytics: **Web Application Development with R Shiny, Flexdashboards, Advanced Data Analytics, Statistical Modelling, Automated Reporting**

Research Publications and Projects |

• Research

Duah, P., Hossein, A., Kansake, B. and Drebenstedt, C. (2019), “Unraveling the Capability of Artificial Intelligence for Prediction of Rock Fragmentation”, *Proceedings of Real-Time Mining, 2nd International Raw Materials Extraction Innovation Conference*, Freiberg, Germany. Benndorf, J. and Höbelbarth, D. (eds), pp.157-177.

Duah, P, Helmut, M. and Drebenstedt, C. (2019), “Prediction of Rock Fragmentation using a Novel Hybrid Evolutionary Algorithm and Extreme Gradient Boosting Machine”, *12th Russian-German Raw Materials Conference*, St. Petersburg, Russia.

Duah, P. (2022), “A Pragmatic Study of Machine Learning and Empirical Algorithms for the Modelling of Blast-induced Fragmentation”, *Master Thesis*, Technische Universität Bergakademie Freiberg, Germany.

Duah, P. (2016), “Prediction of Orthometric Height using Lagrange and Radial Basis Function interpolation Methods”, *Unpublished BSc Project Report*, University of Mines and Technology, Tarkwa, 46p.

• Projects

Software for Project Management Based on Beta Distribution- Three Point Estimate (PERT), Technische Universität Bergakademie Freiberg, Germany.

BergSoft App: A Blast Fragmentation Modelling Software”, Technische Universität Bergakademie Freiberg, Germany.

CONFERENCE |

March, 2019	Real Time Mining, 2nd International Raw Materials Extraction Innovation Conference, Freiberg, Germany (<i>talk</i>)
November, 2019	12th Russian- German Raw-Materials Conference, St.Petersburg, Russia. (<i>talk</i>)

SHORT COURSES AND SUMMER SCHOOL |

April, 2021-July, 2021	Responsible Production and Consumption, <i>European University on Responsible Consumption and Production (EURECA-PRO) (Online Short Course)</i>
April, 2021-June, 2021	Sustainable Development Approaches in Engineering Research and Education, <i>Montanuniversität Leoben, Austria (Online Short Course)</i>
June, 2019	Blasting in Opencast Mining, <i>TU Bergakademie Freiberg, Germany (Summer School)</i>
July, 2019	Deep-sea Mining and Dredging, <i>TU Bergakademie Freiberg, Germany (Summer School)</i>
November, 2020	Geophysical exploration of deposits, <i>TU Bergakademie Freiberg, Germany (Short Course)</i>

August, 2020	Maptek Summer Training Program on Mine Planning and Design, (<i>Online Short Course</i>)
October, 2020	Open pit and underground mine production and economics simulation, RPM Global Training (<i>Online Short Course</i>)

SCHOLARSHIPS/GRANTS |

March, 2021- September, 2021	GDMB Society of Metallurgists and Miners eV, Germany
November, 2020– December, 2020	DAAD-STIBET grant for exceptionally committed Student, Germany
September, 2019 – November, 2019	DAAD-STIBET grant for exceptionally committed Student, Germany
November, 2020	DAAD-STIBET grant for exceptionally committed Student, Germany
June, 2021	DAAD-STIBET grant for exceptionally committed Student, Germany
February, 2020	Friends and Sponsors of the TU Bergakademie Freiberg eV conference grant, Germany
January, 2022-April, 2022	German Academic Exchange Service (DAAD-PROMOS), Germany
September, 2022	2022 DAAD Prize recipient

PROFESSIONAL MEMBERSHIPS |

- Society for Mining, Metallurgy and Exploration (SME)
- GDMB Society of Metallurgists and Miners eV , Germany

LEADERSHIP AND EXTRACURRICULAR ACTIVITIES |

- Founder, former President and Spokesperson of Amnesty International Freiberg, Germany
- Leader of Friends of Theatre committee, Student council of TU Bergakademie Freiberg, Germany
- Mentor, tutor and volunteer for International Students at TU Bergakademie Freiberg, Germany
- African project at the elementary school of Theodor Körner Freiberg, Freiberg, Saxony
- Volunteer at the Festival of Cultures, International Center of TU Bergakademie Freiberg