

MUHAMMAD RAFI AL HAWARI

MULTIDISCIPLINARY APPLIED GEOSCIENCE | MINING | OIL & GAS | GEOTHERMAL | FIELD MAPPING | SUBSURFACE | DIGITAL GEOLOGICAL MODELLING

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PROFESSIONAL SUMMARY

Final-year Bachelor of Engineering candidate in Geological Engineering at Universitas Sriwijaya (GPA 3.80/4.00) with project-based experience across coal and mine geology, systematic field mapping, structural geology, sedimentology, carbonate-karst and volcanoclastic geology, well-log interpretation, GIS, geotechnical workflows and three-dimensional geological modelling. Completed an A-rated PT Bukit Asam geology-and-drilling internship, independent 81 km² mapping across 85 GPS-controlled stations, accepted Gamma Ray-density electrofacies research, and a 404-record evidence-led geoscience portfolio.

Work approach: connect field observations, drillhole/core and well-log data, laboratory evidence, maps, cross-sections and software outputs; validate inputs; separate observation from interpretation; state uncertainty; and communicate technical results clearly. Industry exposure includes mining, oil and gas, geothermal and UAV-supported field activities.

CORE COMPETENCIES

Field Geology & Mapping Traverse planning; GPS/GNSS control; outcrop and lithology description; measured sections; geomorphology; geological maps; cross-sections; field documentation.	Mining & Coal Geology Coal-seam identification; roof-floor-parting and interburden description; core/outcrop-log reconciliation; coal-quality relationships; MineScape workflow.
Subsurface & Energy Gamma Ray and Density logs; electrofacies; multiwell correlation; stratigraphic markers; Petrel horizon and fault interpretation; structural-framework review.	Structural & Geotechnical Strike-dip measurements; fault-zone and fracture analysis; stereographic interpretation; geological sections; Dips and Slide2 workflow practice.
GIS & Geological Modelling ArcGIS Pro; data preparation; georeferencing; digitisation; seam-floor surfaces; 3D geometry; cell/domain review; model quality control.	Research & Communication Petrography; micropalaeontology; technical reporting; scientific figures; accepted manuscript; presentations; source traceability; stakeholder communication.

SELECTED TECHNICAL EXPERIENCE

Integrated Coal Geology, Electrofacies and 3D Stratigraphic Interpretation - Pit N, PT Bukit Asam Tbk

Undergraduate Thesis / Applied Academic Project | Tanjung Enim, South Sumatra | 2025-2026

- Integrated five unique drillhole/log controls, six coal seams (A1, A2, B1, B2, C and D), 19 coal-quality samples, core/outcrop observations, Gamma Ray-Density logs, lithology, stratigraphy, topography and MineScape outputs.
- Classified electrofacies motifs and cross-checked density and lithological context to support roof-seam-parting-interburden boundaries, seam correlation and depositional interpretation.
- Reviewed topographic control, seam-floor surfaces, stratigraphic geometry and cross-sections; checked vertical order, continuity, surface conflicts and model limitations.
- Prepared technical figures, correlation panels, well-log appendices and a traceable Chapter IV evidence archive.

Geology & Drilling Internship - PT Bukit Asam Tbk

Tanjung Enim, South Sumatra | 28 July-28 August 2025 | Evaluation 93.33/100, Grade A

- Connected mine-site observations, drillhole/core records, seam and interburden descriptions, well-log evidence and coal-quality data in review-ready technical documentation.
- Observed and documented geology and drilling workflows while following supervisor instructions, PPE/HSE discipline and field-reporting standards.
- Presented MineScape outputs as a geological workflow: topographic reference, stacked seam-floor surfaces, stratigraphic cell framework, wireframe geometry review and spatial-domain coding inspection.

Karangkencana Systematic Geological Mapping

Kuningan, West Java | 2024-2025 | 81 km² | 1:25,000 | 85 GPS-controlled stations

- Planned and completed traverses across a 9 km x 9 km area; recorded outcrops, lithology, stratigraphic relationships, strike/dip, structures, geomorphology, photographs, coordinates and daily notes.
- Integrated terrain and drainage analysis, measured sections, petrography, microfossil context, stereographic analysis and structural interpretation into geological maps, cross-sections and geological-history reconstruction.
- Documented Halang sandstone-claystone interbeds and fault-related deformation, Lebakwangi limestone-karst features and Kumbang coarse volcanoclastic rocks while separating observation from formation-level interpretation.

SUBSURFACE, OIL & GAS AND ENERGY GEOSCIENCE

Petrel Well Correlation, Seismic and Structural Interpretation

Structured software project | 55 workflow records

- Organised multiwell log displays, stratigraphic markers and correlation panels to compare intervals and support consistent subsurface interpretation.
- Practised seismic display, horizon picking, fault-stick review, fault-surface construction and integrated three-dimensional structural-framework inspection.
- Maintained clear boundaries between fault sticks, continuous fault surfaces, structural frameworks and later modelling stages; treated the work as project-based technical practice, not operating-company employment.

Geothermal and Oil & Gas Industry Exposure

- Participated in technical visits to Pertamina Hulu Rokan Zone 4 and Pertamina Geothermal Energy Area Ulubelu to gain exposure to oil-and-gas and geothermal operations.
- Served as Organising Committee Chair for Pertamina technical-visit programmes, coordinating committee tasks, participants, schedules, host communication and documentation.
- Completed introductory well-control coursework and maintained accurate wording that distinguishes course completion and industry exposure from accredited certification or operating responsibility.

RESEARCH & PUBLICATION

Analisis Elektrofases Berdasarkan Data Well Logging pada Seam Batubara A1-D di Pit N, Tanjung Enim, Sumatera Selatan

Muhammad Rafi Al Hawari & Harnani | GeoScienceEd Journal | Accepted 23 February 2026 | LoA No. 1741/UN18.9.5/DT/V7N1/2026

Applied Gamma Ray and Density log interpretation to classify electrofacies and support seam/interburden boundary recognition, correlation and depositional interpretation. Listed as an accepted manuscript; DOI, final pagination and publisher version-of-record metadata are excluded until independently verified.

SOFTWARE & TECHNICAL TOOLS

Mining and Geological Modelling MineScape; Maptek Vulcan; GEOVIA Surpac; Micromine Origin/Pro; foundation exposure to MineSched.	Subsurface Interpretation SLB Petrel: well correlation, seismic display, horizon/fault interpretation, surface and framework review.
GIS and Field Data ArcGIS Pro; QGIS; Global Mapper; Google Earth/KMZ; GPS/GNSS; geological map and spatial-data preparation.	Structural and Geotechnical Rocscience Dips; Rocscience Slide2; course exposure to Phase2/RS2; stereographic and slope-stability workflows.
Data and Reporting Microsoft Excel, Access, Word and PowerPoint; drillhole tables; interval logs; QA/QC trackers; figures; reports and presentations.	Field Technology UAV/drone safety and basic manoeuvres; manual driving; field-site documentation and HSE-aware work practice.

EDUCATION

Bachelor of Engineering Candidate - Geological Engineering

Universitas Sriwijaya | 2021-2026 | GPA 3.80/4.00

Thesis defended; formal graduation is scheduled for 12 August 2026 in the supplied academic record. The degree suffix is not used before formal conferral.

LEADERSHIP & PROFESSIONAL ENGAGEMENT

Head of Public Relations - SM-IAGI Universitas Sriwijaya | 2023-2024

- Led external communication and stakeholder coordination for student geoscience activities.
- Coordinated schedules, communication materials, event flow, industry-host communication, technical-visit documentation and participant follow-up while keeping industry exposure distinct from employment experience.

CERTIFICATIONS & TECHNICAL TRAINING

- Geology & Drilling Internship Certificate - PT Bukit Asam Tbk | issued 5 February 2026 | A / 93.33.
- Advance Well Control Course - OILGAS.ID | 30 November 2025 | course-completion evidence; not represented as an accredited IADC/IWCF professional certification.
- ArcGIS Pro - Mapping and Mine-Potential Identification - Langen Teknik Satria | 6-8 June 2025.
- MineScape - Long-Term Mine Planning, Coal Case - Langen Teknik Satria | 9-11 May 2025.
- Vulcan Foundation and Mine Design for Mineral - SIBIMA / Bima Shabartum Group | 20-27 April 2025.
- Surpac Resource & Reserve Modelling and Estimation, Nickel Case - Langen Teknik Satria | 13-16 March 2025.
- Estimation Methods from Geology to Mining Application / Micromine Pro - EduBlast | March 2025.
- Open-Pit Geotechnical, Hydrology and Hydrogeology Suite - Phase2, Slide and Dips - Langen Teknik Satria | February 2025.
- Drone Safety & Basic Manoeuvres - APDI | Certificate No. 10844-2025 | February 2025.
- Geological Modelling & Resource Estimation, Coal Case - PITINDO Training | 23-24 January 2025.
- Mine Scheduling with Surpac & MineSched, Nickel Case - Langen Teknik Satria | 13-14 July 2024.

PORTFOLIO EVIDENCE BASE

STRATUM is an evidence-led geoscience portfolio in which each public claim links to its project source, report figure, software sequence or documentary record.

404 public portfolio records	137 Chapter IV scientific figures	127 software workflow records
45 field-photo records	27 well-log appendices	8 source groups

ROLE ALIGNMENT

Mining & Coal Geology Seam documentation, core/log correlation, coal-quality context, MineScape geological workflow and technical reporting.	Oil, Gas & Subsurface Well correlation, horizon and fault interpretation, Petrel structural workflows and formation-evaluation development pathway.
Geothermal & Energy Transferable structural, subsurface, modelling and data-integration skills, supported by PGE Ulubelu technical-visit exposure.	Field Mapping & GIS Systematic mapping, stratigraphy, structural measurements, ArcGIS workflows, maps, sections and geological synthesis.
Structural & Geotechnical Fault-zone documentation, stereographic analysis, discontinuity assessment and two-dimensional slope-stability workflow practice.	Research & Communication Accepted manuscript, evidence-linked reports, scientific figures, presentations, project documentation and committee leadership.

ADDITIONAL INFORMATION

Languages: Bahasa Indonesia - Native; English - Professional working proficiency.

Mobility: Indonesian SIM A and SIM C; manual driver; open to field, site, roster/rotation and office-based graduate assignments, subject to role and legal work-authorisation requirements.

Professional focus: Graduate mine geology; exploration and field geology; subsurface and formation-evaluation support; GIS; geological modelling; structural/geotechnical support; technical documentation and energy geoscience development pathways.

Evidence policy: Academic, training and industry-exposure records are labelled according to evidence level. No production authority, regulatory reserve declaration, rig-site responsibility or commercial field-development accountability is implied.

References and original supporting records are available for verification. The STRATUM portfolio provides direct access to project, report, software, field and documentary evidence.