Alifya Febriana

CONTACT INFORMATION	EMAIL: alifyafebriana@gmail.com GitHub: github.com/AlifyaFebriana WEBSITE: alifyafebriana.com Hackerrank: hackerrank.com/alifyafebriana

RESEARCH INTERESTS

Trustworthy machine learning and deep learning; computer vision; human-computer interaction; and explainable AI

EDUCATION

Yuan Ze University, Taoyuan, Taiwan

M.S. Electrical and Communication Engineering, Current GPA: 3.86 (transcript)   Aug 2022 - present

- Advisor(s): Prof. Chih-Yang Lin, Prof. Po-Chiang Lin
- Relevant courses: Pattern Recognition, Advanced Windows Programming, Database Systems, Data Analysis, Internet of Things, Artificial Neural Networks, Machine Learning, Neural Networks and Deep Learning, Mobile Communication
- Activities: Invited Speaker at AWS Cloud Certification Experience Sharing Event hosted by The College of Electrical and Communication Engineering   2023

Syiah Kuala University, Banda Aceh, Aceh, Indonesia

B.Eng. Computer Engineering, GPA: 3.68 (transcript)   Sep 2018 - May 2022

- Thesis title: Implementation of Deep Learning Method for Multi-class Classification of Green Bean Coffee Arabica using USK-Coffee Dataset
- Research Advisor(s): Dr. Kahlil, S.T., M.Eng, Ir. Rahmad Dawood, S.Kom., M.Sc., IPM., ASEAN.Eng.
- Relevant Courses: Calculus, Programming, Linear Algebra, Database Design, Discrete Mathematics, Digital Logics and Design, Data Algorithms, Machine Learning, Computer Vision, IoT, Software Engineering, Digital Image Processing, Artificial Intelligence, HCI, Signal Processing

PUBLICATIONS

Pseudo-LiDAR Meets Agriculture: Leveraging 3D Monocular Point Cloud Processing for Coffee Beans

Alifya Febriana*, Isack Farady, Po-Chiang Lin, Chih-Yang Lin, Kahlil Muchtar

Published in the *IEEE COSITE 2023* (oral presentation)

Performance Evaluation of Coffee Bean Binary Classification through Deep Learning Techniques

Fajrul Islamy, Kahlil Muchtar, Fitri Arnia, Rahmad Dawood, Alifya Febriana*, Gregorius Natanael Elwirehardja, Bens Pardamean

Published in the *Innovative Technologies in Intelligent Systems and Industrial Applications*

USK-COFFEE Dataset: A Multi-class Green Arabica Coffee Bean Dataset for Deep Learning

Alifya Febriana*, Kahlil Muchtar, Rahmad Dawood, Chih-Yang Lin

Published in the *IEEE CyberneticsCom 2022* (oral presentation)

Embedded-based Tomato Septoria Leaf Detection with Intel Movidius Neural Compute Stick

Kahlil Muchtar, Chairuman Chairuman, Maya Fitria, Muhammad Yusuf Kardawi, Alifya Febriana*, Nona Zarima, Chih-Yang Lin

Published in the *IEEE GCCE 2021*

ACADEMIC RESEARCH EXPERIENCE

Computer Vision and Interactive Technology Lab, Yuan Ze University, Taoyuan, Taiwan

Research Assistant   Jul 2022 - present

- Conducted research under Prof. Chih-Yang Lin to build a Point Cloud that mimics the LiDAR camera and created a depth estimation model for coffee beans, published in the COSITE 2023
- Build automatic 3D pseudo-labels from unlabeled Pseudo-LiDAR that follow the format of the KITTI dataset to reduce annotation costs
- Exploring the 3D monocular object detection for detecting and localization of the multiple coffee beans.

Computer Vision Lab (COMVISLAB), Syiah Kuala University, Banda Aceh, Aceh, Indonesia
Research Assistant   Jul 2021 - Jun 2022
- Conducted research under Dr. Kahlil, S.T., M.Eng and Ir. Rahmad Dawood, S.Kom., M.Sc., IPM., ASEAN.Eng. to build a deep learning model system to sort green coffee beans, published in the IEEE CyberneticsCom 2022
- Worked with the research group on a project of the coffee beans using computer vision and a variety of ML classification techniques.

PROFESSIONAL
EXPERIENCE

Taiwan Textile Research Institute, New Taipei City, Taiwan
Software Engineer Intern   Jun 2023 - Nov 2023
- Completed 6 months of work experience as a software engineer at TTRI (財團法人紡織產業綜合研究所) especially in a research team working with a topic about Smart Gloves with Haptic Feedback for VTuber Fanmeeting and implemented communication on the gloves between IoT with Unity
- Conducted training about fabrics and manufacturing tech, AR/VR, Unity, C++, Internet of Things, Business and Marketing, and Digital Design.

Keio University, Tokyo, Japan
AI^3 & SOI Asia Internship   Jun 2022 - Aug 2022
- Completed 3 months of work experience at Keio Univ. (慶應義塾大学), especially in a research team working with a team of 3 people with different topic [badge]
- Developed a multi-class classification system to sort coffee beans using YOLO algorithm with USK-Coffee Dataset and consistently achieving all set targets weekly and monthly of tasks
- Undertook training in the operation of virtual machine linux and project management tools to stay focused on tasks and gained hands-on experience of its use in developing systems.

PT. Sumber Energi Gerai, Aceh, Indonesia
Project Manager   Jul 2020 - Jan 2022
- Established and managed detailed budget requirements with regular review from the contract manager, overseeing project progress and resource allocation
- Led project planning, execution, and evaluation to ensure standards, budget and deadlines were met
- Supervised and coordinated work schedules of technical staff to ensure each project stayed on track with a target completion time of two months/project
- Successfully managed projects such as "Bantuan Listrik Dhuafa 2021", "Bantuan Listrik Dhuafa 2022", "Bantuan Listrik Distamben", and "Bantuan Listrik PT. PLN (Persero)" collaborating with PT. PLN (Persero) [Indonesia State Electricity Company] and Department of Energy and Mineral Resources Aceh to provide electricity support to underprivileged communities

PT. Telekomunikasi Indonesia, Aceh, Indonesia
Data Analyst Intern   Jun 2021 - Aug 2021
- Managed and maintain various data related to IndiHome (Indonesia Digital Home) network interference
- Conducted daily reports using the private company's software and Ms. Excel to highlight the quality of the network data clearly.
- Collated and monitored data on the private company's software to ensure customers receive the best services

Yayasan Anak Bangsa Bisa by Gojek, Jakarta, Indonesia
Data Analyst Intern   May 2021 - Jun 2021
- Undertook training about Python and SQL, contributed on the technical skills webinars and online classes about hard & soft skills

Bangkit Academy led by Google, Tokopedia, Gojek, & Traveloka, Jakarta, Indonesia
Machine Learning Graduate Student   Jan 2021 - Jul 2021
- Worked on a capstone project with my team and was responsible for developing a deep learning model about He-Skinn App: Skin Lesions Detection [completion]

- Selected as one of the Machine Learning Students from 60K+ applicants across Indonesia
- Undertook training and specializations about Mathematics, Python, Deep Learning and Career Development [transcript]

Appen, China
Data Collector and Validation Freelance   Feb 2021 - Jun 2021
- Worked on an end-to-end project within AI team, collect and validate usable or unusable voice data

HONORS AND AWARD	

- 1st place at DIGI+ X TCA Global Talent Awards with an innovation called "Smart Gloves for VTuber Interaction" [certificate]   2023
- AWS Cloud Practitioner Certified [badge]   2023
- Microsoft Certified DP-900 Azure Data Fundamentals [certificate]   2022
- 1st place at GEMASTIK 14 [A program of the National Achievement Center (PUSPRESNAS), Ministry of Education and Culture Indonesia] Smart Device, Embedded System & IoT division with an innovation called "GET KUPI: Automatic Sorting of Green Beans Coffee Based on IoT and Machine Learning [certificate] 2021
- TOP 10 in IoT Makers Creation held by Ministry of Communication and Information Technology Indonesia with innovation called "UVC Sterilization Box: Smart Device and Monitoring System" [certificate]   2020
- TOP 10 in GEMASTIK 12 [A program from Ministry of Research, Technology, and Higher Education Indonesia] Smart City division with innovation called "TONG BROEH: Smart Waste Sorting Bin Metal and Non-metal based on IoT" [certificate]   2019

TEACHING EXPERIENCE

Digital Talent Scholarship Program Fresh Graduate Academy by Ministry of Communication and Information Technology Indonesia, Jakarta, Indonesia
Teaching Assistant   Jul 2021 - Aug 2021
- Led and designed tutorials, marked assignments, and demonstrated lab sessions for the 20+ fresh graduates in the following course: Big Data using Python (instructed by Ir. Rahmad Dawood, S.Kom., M.Sc., IPM., ASEAN.Eng.)
- Graded 50+ assignments per weekly period to aid the lecturer

Syiah Kuala University, Banda Aceh, Aceh, Indonesia
Teaching Assistant   Sep 2019 - Jun 2021
- Reviewed monthly student homework, quizzes, and tasks based on their progress sections of the modules.
- Contributed to develop modules for lab practice
- Provided office hours, co-delivered lectures and recitations, and designed and marked assignments for the following undergraduate courses: Physics Science 1 + Lab (instructed by various lectures, Fall 2019), Physics Science 2 + Lab (instructed by various lectures, Fall 2019), Circuits and Electronics + Lab (instructed by various lectures, Fall 2019), Programming 1 + Lab (Ir. Rahmad Dawood, S.Kom., M.Sc., IPM., ASEAN.Eng., Spring 2019), Programming 2 + Lab (Ir. Rahmad Dawood, S.Kom., M.Sc., IPM., ASEAN.Eng., Fall 2019), Programming 1 + Lab (Ir. Rahmad Dawood, S.Kom., M.Sc., IPM., ASEAN.Eng., Spring 2020), Programming 2 + Lab (Akhyar, S.T., M.Eng, Fall 2020), Programming 1 + Lab (Dr. Khairun Saddami, S.T, Spring 2021)

VOLUNTEERING AND SERVICE

- Vice Head of Student Resource Development Division at Computer Engineering Student Association   2019
- Programmer Member of Fixed Wing Division at Seulawah Team Unmanned Aerial Vehicle Association   2020

SKILLS AND INTERESTS

Technical: Python (Tensorflow, PyTorch), C, MATLAB, HTML, CSS, Unity, Java, SQL, G-Suite
Languages: Indonesian, English
Interests: Reading, Journaling, Crocheting