DONGHYEUN LEE

Austin, TX | 1 (512) 731-2449 | donghyeunlee1@gmail.com | LinkedIn | GitHub

SUMMARY

FullStack & AI Engineer with 4+ years of softwaredevelopment experience in researchdriven environments. Expert in Python, Java, and JavaScript for designing, developing, and maintaining scalable applications. Skilled at troubleshooting and collaborating with crossfunctional teams to deliver innovative features. Proven ability to optimize processes and deliver impactful project results.

EDUCATION

University of Texas at Austin **Jun 2024 - Mar 2025**
Post Graduate Program, Artificial Intelligence & Machine Learning
- **GPA:** 3.33
- **Coursework:** Data Science, LLM, GAN

HiMedia Academy **Apr 2024 - Oct 2024**
Bootcamp, AI and Full Stack Development in Java
- **Achievements:** •Achievements: CRUD App, LLM Chat App

Sogang University **Feb 2018 - Feb 2020**
Masters, Chemistry
- **Achievements:** •Thesis: Insilico Chemistry & Genome Optical Sequencing | GPA4.3

SUNY Buffalo State University **Sep 2016 - May 2017**
Masters of Science, Biomedical Engineering
- **Achievements:** Biomedical Engineering, •Focus: Drug Delivery Systems

Hong Kong University of Science and Technology **Sep 2010 - May 2013**
Bachelors of Science, Chemical and Bioproduct Engineering
- **Achievements:** •GPA2.44 •Capstone: RNAAptamerBased Drug Delivery System

WORK EXPERIENCE

Proteina Inc. **Jul 2021 - Feb 2024**
Production and Process Development Senior Researcher *Seoul, South Korea*
•Optimized thinfilm deposition, biochemical functionalization, and antifouling for microarray chips ’‘throughput & “defects.
•Led crossteam design sprints; integrated nondestructive QC mirroring modern DevOps “shiftleft” testing.
•Built Python automation for ELISA & bigdata QC, cutting processing time 40%.
•Owned ISOcompliant documentation and status dashboards for technical & nontechnical stakeholders.

Palogen LLC **Aug 2020 - Jul 2021**
Research And Development Engineer *Seoul, South Korea*
•Created Python pipeline to detect nanoporewafer defects ’30% faster QC.
•Automated dataprocessing workflows, reduced manual errors <1%.
•Drafted IRB & ISO13485 docs for COVID microarray diagnostics; bridged engineering & regulatory teams.

PROJECTS

Commercialization Support Project **2023 - 2024**
KTL, KRISS, and Nano Convergence Technology Institute Collaboration
- Participated in technology commercialization initiatives focused on nano-diagnostics and microarray platforms
- Contributed to product transfer and regulatory certification, including development of non-invasive QC for nano-pore microarrays and TIRF-based iELISA
- Led cross-institutional collaboration in the Precision Medicine Technology Commercialization Project with GC Biopharma and national institutes

Full Stack Development Projects | http://github.com/kiryuchi10 **Apr 2024 - Jul 2025**

- •AIPowered SCM App (React+FastAPI+LSTM/Prophet+GPT) — 15% lower forecast error.
  •Plant Seedling Classifier (PyTorch ResNet50) — 93% accuracy on 12 species.
  •StockNews Sentiment & Summary (FinBERT+T5) — F1 0.91, 70% faster review.
  •BankChurn Predictor (XGBoost) — AUC 0.88, projected 8% churn drop.
  •LoanPropensity Model (LightGBM) — 4.2× lift in topdecile targeting.
  •AI UI Builder & AI Blog Assistant — cut UI mockup time 70%; autopublish SEO content.
  •MCP 3DModel Automation — 40% faster Rhino3D workflows.

KEY SKILLS

- **Languages**: Python, Java, JavaScript, SQL
- **Frameworks**: React.js, Flask, Spring Boot, MyBatis, FastAPI
- **Databases**: MySQL, PostgreSQL, MongoDB
- **Cloud/DevOps**: Docker, AWS basics, Cloud Platforms
- **Tools**: Git, VS Code, Eclipse
- **AI & Full Stack**: AI applications, Full-stack development, AI APIs
- **Core Competencies**: Web Development, Computer Science Fundamentals, Data Pipeline Development, Data Modeling, Curiosity

CERTIFICATES

- IBM - Advanced Machine Learning and Signal Processing
  Credential ID: MSF6W4FE9RS6 Issued: Jun 2024 Expires: Jun 2034
- DeepLearning. AI – Introduction to TensorFlow for AI, ML, and DL
  Issued: May 2024 Expires: May 2034
- DeepLearning. AI – Convolutional Neural Networks in TensorFlow
  Issued: May 2024 Expires: May 2034
- IBM – Data Analysis with Python
  Credential ID: 8TAA6DNWHWM9 • Issued: May 2024 Expires: May 2034
- IBM - Databases and SQL for Data Science with Python (MY
  Credential ID: VQ7B2QDEQVX2 Issued: May 2024
- IBM – Python for Data Science, AI & Development
  Credential ID: VK283D2LM9U9 • Issued: May 2024 Expires: May 2034

PUBLICATION

- Y.T.; Oh, H.; Seo, M.J.; Lee, D.H.; Shin, J.; Bong, S.; Heo, S.; Hapsari, N.D.; Jo, K.. 21 Fluorescent Protein-Based DNA Staining Dyes. Molecules 2022, 27, 5248. https://doi.org/10.3390/molecules27165248
- Wang, D., Lee, D. H., Huang, H., Vu, T., Lim, R., Nyayapathi, N., ... Lovell, J. F.. Ingestible roasted barley for contrast-enhanced photoacoustic imaging in animal and human subjects. Biomaterials, 175, 72–81. doi:10.1016/j.biomaterials.2018.05.016