Denis Leang

✉ dsl2179@columbia.edu   in linkedin.com/in/denis-leang   ⬤ github.com/YeriAddict   🌐 yeriaddict.github.io/

Education

Columbia University   Sep 2023 - Dec 2024
M.S. in Data Science   *New York, NY*
- **Relevant Coursework:** Machine Learning, Artificial Intelligence, Computer Vision, Statistical Inference, Exploratory Data Analysis & Visualization, Computer Systems

Telecom Saint-Etienne   Sep 2020 - Aug 2023
B.S./M.S. in Computer Science & Mathematics (Diplome d'ingenieurs)   *Saint-Etienne, FRA*
- Prepared for the French national entrance examinations to Grandes Ecoles at Lycee du Parc *(2017–2020 — Lyon, FRA)*
- **Relevant Coursework:** Data Structures & Algorithms, Database and Information Systems, Operating Systems, Distributed Computing, Cloud Computing, Big Data, Computer Graphics, Probability & Statistics, Optimization & Estimation methods

Experience

Analysis Group   Jun 2024 - Aug 2024
Data Scientist Intern   *Boston, MA*
- Revamped a CRUD patient survey management app built with **C#** (**.NET**) and **React**, enabling more efficient distribution of clinical drug testing surveys by honing workflows and strengthening vendor engagement
- Reduced user navigation time by 50% by redesigning the application's structure using scalable **React** components and optimizing API calls, improving overall user efficiency
- Executed **Python** scripts leveraging the Etherscan API to analyze cryptocurrency transactions across multiple clusters, tracking billions of dollars on Binance and facilitating investigations into suspicious wallet activity

Bionomous SA   Feb 2023 - Aug 2023
Software Engineer Intern   *Villaz Saint-Pierre, CHE*
- Developed a CRUD client update and support portal written in **Java Spring Boot** and **Vue.js** to automate software updates for in-house products, eliminating manual engineer involvement and improving customer experience and release management
- Implemented a secure authentication system with **Microsoft Azure** Active Directory and JWT tokens, boosting login efficiency and strengthening security for users and administrators
- Upgraded company products (**Java** for **Android**, **Flutter/Dart** for **Android/iOS**) by incorporating client-requested functionalities, increasing usability and customer satisfaction

Projects

Portfolio Website
- Designed a personal portfolio in **React** using the App Router paradigm and deployed it as a static website using GitHub Pages

Spotify Dashboard
- Built a Spotify listening habits dashboard in **React** with real-time, dynamically fetched data from the Spotify and Last.fm APIs, visualizing trends through interactive charts
- Refined data fetching for real-time music analytics by executing an efficient caching strategy and a CI/CD pipeline with GitHub Actions, reducing memory usage and query time by 4×

Iris Recognition Model
- Engineered an iris recognition package with **OpenCV** and **Python**, incorporating preprocessing, feature extraction, and LDA-based matching to support one-to-one and one-to-many biometric recognition modes
- Achieved a consistent 95% Correct Recognition Rate (CRR) by implementing a Gabor-based multichannel filtering technique, enhancing feature extraction across L1, L2, and Cosine similarity metrics

Space Simulation Game
- Optimized memory efficiency in **C++**/**OpenGL** by dynamically rendering space elements (asteroids, planets, starship) to prevent memory leaks and improve performance
- Integrated real-time starship navigation by leveraging **OpenCV** for hand movement detection, enhancing interactivity and gameplay fluidity

Electronic Health Record (EHR) Study on Interstitial Lung Disease with Columbia Medical School
- Conducted data wrangling in **Python** to harmonize large-scale EHR data across multiple health systems
- Fine-tuned Named Entity Recognition (NER) and BERT-based models on medical text to analyze chest CT reports, achieving an 30% improvement in accuracy for identifying drug-disease associations, contributing to enhanced clinical treatment guidelines

Skills

Technical: Proficient in Python, Java, TypeScript, React, HTML, CSS, SQL, pandas, scikit-learn, Git, Agile. Experience in Dart, Flutter, C#, R, C++, polars, OpenCV, Tensorflow, PyTorch, NLP, Deep Learning, Azure, Spring Boot, Vue.js, Next.js, Tailwind, Docker, Spark, Design Patterns. Used Kubernetes, AWS, GCP, Kafka, MongoDB, Redux, Leaflet, OpenGL, Jira, Asana.
Spoken Languages: French, German, Khmer