Jonathan Farrell Kusuma

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Education

University of Southern California   January 2023-December 2024
Master of Science in Applied Data Science   **Cumulative GPA: 3.7**
- Machine Learning, Database Systems, Optimization Techniques, Data Management, Data Mining, Search Engines

University of Illinois at Urbana-Champaign   August 2020-May 2022
Bachelor of Science in Information Sciences (Dean's List)   **Cumulative GPA: 3.9**
- Data Management and Curation, Machine Learning, Data Visualization, HCI, Data Analytics

Technical Skills

- **Programming Languages:** Java, Python, R, PHP, JavaScript, HTML5 & CSS3, SQL (PostgreSQL, MySQL)
- **Frameworks**: React, Node.js, Flask, Hadoop, Tensorflow, scikit-learn, Pandas, NumPy, Matplotlib, Seaborn
- **Tools:** Git, Docker, Kubernetes, MongoDB, Spark, AWS (EC2, S3, Lambda), Jenkins, Jupyter Notebook, Hadoop, Power BI, Azure (Data Factory, Machine Learning Studio), Figma, Adobe (Illustrator, After Effects)

Work Experience

Nojorono Tobacco International / Software Developer Intern - Remote   July 2024-August 2024
- Engineered a predictive inventory model in **Python (LSTM)** to anticipate shortages, improving stock accuracy by 20%
- Developed a **React+Flask** dashboard visualizing supply metrics, expediting decision-making on 500K+ daily records
- Built an **ML** workflow (**Airflow**) to streamline model retraining, enhancing predictive stability over 6-month horizons
- Developed a **gradient-boosting model** to predict tobacco leaf quality, boosting classification accuracy by 15%

Ayola.co / Software Developer - Remote   November 2023-February 2024
- Developed predictive models using **scikit-learn** and **XGBoost** to forecast booking trends of 7,000 users
- Designed and optimized **MySQL** schemas, reducing query times by 30% for 25,000 reservations
- Led the creation of a real-time recommendation engine in **Python**, enhancing user engagement by 25%

HathiTrust Research Center / Web and UX Researcher - Champaign, IL   May 2021-November 2021
- Engineered NLP pipelines using **NLTK** and **spaCy** to analyze textual patterns across 50,000 documents
- Devised **predictive models** to analyze user search behavior, reducing content retrieval time by 20%.
- Implemented data visualizations using **Tableau** and **Matplotlib** to present insights on document accessibility

Gratia Husada Farma / Software Developer Intern - Remote   May 2020-August 2020
- Restructured official website performance, eliminating 40% of load time by integrating modern frameworks
- Data extraction using **Selenium** and **BeautifulSoup**, reducing data collection time by 50% for pharmaceutical data
- Optimized **SQL** queries, leading to a 12% reduction in p95 response times

Biznet Networks / Software Developer Intern - Jakarta, Indonesia   July 2019-August 2019
- Implemented ETL processes in **Python** and **SQL**, optimizing data workflows to handle 1TB of network data
- Built an internal tool for a database management system using **PostgreSQL**, handling over 1300 employees
- Implemented automatic **RESTful** API testing using Postman, improving data validation speed by 30%

Leadership and Involvement

USC 3D4E / Lab Manager - Los Angeles, CA   August 2022-December 2024
- Deployed a **TensorFlow**-based machine learning model with a **camera system** to detect and predict 3D print failures in real-time, leveraging image data to achieve a 30% reduction in failed prints.
- Trained a team of 15 lab techs in **Arduino** to develop 3D printing solutions, enhancing skill diversity within the lab
- Built a custom mechanical keyboard with an **RP2040** microcontroller, coding **C firmware** for precise key mapping

Graduates Rising in Data Science (GRIDS) / Vice President - Los Angeles, CA   January 2023-May 2024
- Led **machine learning workshops**, boosting participation by 35% and educating 100+ members on **ML** techniques
- Organized and spearheaded **hackathon events**, fostering creativity and collaboration among participants
- Developed a website using **NextJS** and **Docusaurus**, boosting engagement and accessibility for 1500+ members

Solar Chapter / Marketing and Web Officer - Champaign, IL   August 2021-August 2022
- Created a **GIS-based visualization** using **Folium** to showcase community impact, improving stakeholder support
- Planned and led **website development** projects, boosting online engagement and social outreach by 21%
- Launched **marketing campaigns** to build sponsor partnerships for a $25,000 community development project

Engineering Without Borders / Software and Electrical Engineer - Seattle, WA   May 2019-June 2020
- Conducted **research** for public solar charging stations with active sun-tracking capability
- Collaborated on an ML model in **Python** to estimate sunlight exposure, enhancing solar panel positioning accuracy