GUK IL KIM

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Education

University of Southern California Aug 2023 – May 2025
Master's of Science in Computer Science (GPA: 3.61) *Los Angeles, CA*
- **Coursework:** Database Systems, Multimedia, Algorithms, Information Retrieval, Machine Learning, Deep Learning

University of California, Davis Sep 2019 – Mar 2023
Bachelor's of Science in Computer Science (GPA: 3.73) *Davis, CA*
- **Coursework:** Algorithms, Data Structures, Network, Operating Systems, Full Stack Development, API Development

Experience

CoSignOn Dec 2024 – Present
Software Engineer Intern, *Software Team* *Los Angeles, CA*
- Automated a 7-day backup rotation system on Linux by architecting Python scripts leveraging **OS** features and rsync, which ensured real-time collaboration, production integrity, and time management through **CI/CD** with Git/GitHub
- Implemented a full-stack graph visualization app with **FastAPI** and **React Chart**, streamlining data updates every 3 seconds to auto-update graphs, flagging disks exceeding backup times, and reducing manual error detection in Linux
- Developed a GitHub API-based merge request automation script that takes user input parameters and generates merge requests streamlining the GitLab workflow by eliminating the need for manual web portal interactions.

Teamlab.media Feb 2024 – Jan 2025
Full-Stack Developer, *Technical projects lead* *Los Angeles, CA*
- Managed development of a B2B wholesale platform with **GraphQL** for Stencil API access, implemented **CI/CD** with Git, and utilized parallel development to accelerate delivery, providing the platform to the client within 4 months
- Developed a custom **ETL script** for bulk product imports, enabling feature matching and support for product variations, resulting in automated backups across 70,000+ products and improved operational efficiency
- Optimized display, authentication, and checkout systems as part of maintenance support and customer experience

School of Veterinary Medicine, UC Davis Jul 2022 – Jan 2024
Software Developer, *Lepto-classifier team* *Davis, CA*
- Achieved 70% accuracy and 81% AUC in Canine Classification for canine patients by filtering dataset categories and refining feature selection to optimize model inputs, improving logistic regression performance and reliability
- Fixed model output by debugging misconfigured sex-values on backend of lepto-classifier
- Integrated the Lepto-classifier ML model with a **Flask API** to enable real-time predictions through a web interface, validating functionality by testing user input flow and ensuring accurate output generation

Utilities Headquarter, UC Davis Jul 2022 – Aug 2023
Automation Engineer, *ArcGIS Inspection team* *Davis, CA*
- Reduced manual labor and minimized errors by creating a **PHP script** with regex string matching to validate 15,000+ ARCADE APJ file paths, automatically correcting mismatches to valid paths and streamlining parallel production
- Mitigated risks to UC Davis students by leading infrastructure inspections, utilizing **Python** to develop ArcGIS portfolios and proposals for the departmental board, ensuring informed decision-making

Projects

Shopgirly Wholesale Platform | *JavaScript, Stencil API, XML, HTML/CSS, Git, Github, Big-Commerce, GraphQL*
- Developed a **product display slider**, enabling users to preview **top sellers, featured, and new products**
- Integrated **Venmo payments** by modifying the Stencil Checkout SDK and configuring the payment gateway

Feline UTI Prediction (ML Research) | *Python, Scikit-learn, ExtraTreesClassifier, PyCaret, Pandas, Matplotlib*
- Engineered key features (protein, glucose, WBC, RBC, pH) to optimize accuracy and assess diagnostic impact
- Evaluated multiple models for performance comparison, used **ExtraTreesClassifier** to achieve **80.48% AUC** with **0.68% higher accuracy**, and documented findings in a technical report for future ML publication
- Conducted **comparative model evaluation**, refining decision boundaries and improving sensitivity and specificity

Technical Skills

Languages: Python 3.0 (Expert), HTML/CSS (Expert), JavaScript (Professional), C++ (Prior Experience), C (Prior Experience)
Libraries/Frameworks: React.js, Flask, Django, Node.js, Bootstrap, Flex, Grid, Pandas, Numpy, scikit-learn
Tools: Git, Github, GitLab, Docker, Anaconda, Jupyter Notebook, Insomnia, Postman, Virtuoso, Linux (CLI, Bash), Vim
Databases: MySQL, SQLite3, PostgreSQL, MongoDB