

CLEMENT OU

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PROFESSIONAL SUMMARY

- Junior at Carnegie Mellon University, majoring in Statistics and Machine Learning. Skilled in Python, C, and full-stack development, aiming to leverage analytical and technical skills in a challenging software engineering role.

EDUCATION

- **Carnegie Mellon University** Pittsburgh, PA
Bachelor of Science in Statistics and Machine Learning May 2025
 - **Relevant Coursework:** Algorithms & Data Structures, Computer Systems, Distributed Systems, Machine Learning, Software Engineering, Deep Learning, Deep Reinforcement Learning, Machine Learning with Large Datasets, Probability and Inference, Statistical Computing, Statistical Visualizations, Web Development, Robotic Process Automation
 - **Activities:** Students Using Data for Social Good (Data Project Chair), CMU Data Science Club (Competitions Director)
 - **Awards:** Dean's List (High Honors)

EXPERIENCE

- **Jabil** San Jose, CA
Software Engineer (Test) Sep. 2022 - Apr. 2023
 - Engineered a Python-based test line monitoring software, reducing test-related errors by 20% through advanced logging and failure analysis techniques.
 - Spearheaded drone camera system and display technology testing projects using C++ and Python, enhancing product reliability and compliance with industry standards.
 - Managed and supervised a test site team, ensuring efficient testing, debugging, and failure resolution processes. Utilized Agile methodologies for project management.
 - Introduced new test frameworks and automated scripts in Python and Shell, improving testing efficiency and accuracy in failure diagnostics.

PROJECTS

- **Emotion Detector:** Developed a deep learning-based emotion detector web application using Python, TensorFlow, and OpenCV.
 - Fine-tuned the YOLO neural network, achieving 70% accuracy in differentiating six human emotions.
 - Compiled a dataset of 50,000 images, enhancing model training and performance. Used Python and OpenCV for dataset preparation.
 - Streamlined data annotation and leveraged AWS EC2, optimizing cloud-based training and deployment.
 - Implemented the application via Django, ensuring scalability and user accessibility.
- **IoT Door Lock:** Engineered an IoT Door Lock system with a user-friendly Android app interface.
 - Designed a Raspberry Pi-based lock mechanism, applying IoT principles for seamless operation. Utilized Python for device programming.
 - Developed a Python and Django API for remote management and robust Internet connectivity.
 - Programmed an Android app in Java, focusing on security and user experience.
- **Home Linux Server:** Built a versatile Ubuntu server for personal and family use.
 - Managed key services like Bitwarden and Plex, demonstrating server management skills. Used Docker for containerization.
 - Authored scripts for efficient video transcoding, reducing storage use by 60% without compromising quality. Utilized Bash scripting and FFmpeg.
 - Ensured server uptime and security, highlighting expertise in server maintenance and containerization.

- **Animal Foods:** Created 'Animal Foods', a social web application using PHP, Apache, SQL, and Python.
 - Implemented core functionalities like user interaction and post creation with PHP and SQL.
 - Developed a recommendation system combining TF-IDF and SVD matrix factorization, enhancing user experience.
 - Integrated features like lazy signup and user dashboard, showcasing a blend of technology and business acumen.
 - Utilized generative AI to simulate user interactions, refining the recommendation algorithm.
- **World Bank Data Analysis:**
 - Collaborated in a team of four to clean and analyze a large World Bank dataset using R, handling 50 variables and 2,500 observations to study political stability.
 - Conducted exploratory data analysis (EDA) to identify key causal variables and created a variety of graphics including maps and clusters to represent complex relationships.
 - Enhanced code efficiency and readability by restructuring the R Markdown file, contributing to a more streamlined and coherent data analysis process. Presented findings in a knitted R Notebook to the professor, demonstrating effective data communication and visualization skills.

TECHNICAL SKILLS

- **Languages:** R, Python, C/C++, Java, Javascript, HTML/CSS, SQL
- **Developer Tools:** Linux, Nginx, Git, Docker, GCP, AWS, PyTorch