

Joseph Mangapit

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MS graduate in computer science at University of California, Riverside with a focus in NLP/ML engineering, cybersecurity, and data analytics. I utilize Python and C++ for my general languages and have leveraged Pandas, LLM APIs, TensorFlow, Burp Suite and more in my projects. I've developed expertise in research and instruction through work as a cybersecurity research intern using Ghidra in an agile environment and being an AI teaching assistant helping with ETL and more.

Education

University of California, Riverside – MS in Computer Science | GPA: 3.56 Dec 2024

University of California, Riverside – BS in Computer Science w/ Business Applications | GPA: 3.78 Cum Laude Mar 2023

Skills

Languages: Python, C++, PSQL, JavaScript, HTML, LC-3 Assembly, Java

Technologies: Pandas, Docker, Ghidra, FastChat, scikit-learn, Burp Suite, NLTK, spaCy, Arduino, Vue, Apache Spark

General: Interpersonal Communication, Technical Communication, Adaptability, Time Management

Projects

Automatically Jailbreaking Black-Box LLMs <https://github.com/Badminininja/TreeOfAttacks>

Reference – Yue Dong, yue.dong@ucr.edu – My professor

- Successfully bypassed security restrictions in 44% of test cases against a state-of-the-art LLM.
- Utilized LLM APIs and related libraries: OpenAI, FastChat, Replicate, Accelerate.
- Leveraged Wandb for comprehensive experiment tracking and real-time graph visualization.

Ultrasonic Dodging Game (Embedded Systems) <https://youtu.be/zf9IWcYN9j4>

- Developed a block survival game on an Arduino using C++.
- Integrated an ultrasonic sensor, LCD display, LED light, button and more.

Yelp's Perfect Establishments (Data Analytics, Big Data) <https://github.com/kkadhih/YelpBigDataAnalysis>

- Developed analytics on Yelp's big dataset using Apache Spark in Python and developed in a notebook.
- Applied a random forest ML model using scikit-learn to give estimates based on the analyzed data.

Extended Resume Webpage <https://badminininja.github.io/>

- Contains classes taken, additional projects, and more experience

Experience

Teacher Assistant – University of California, Riverside – Riverside, CA Mar 2024 – Jun 2024

Reference – Sofia Sakellaridi, sofias@ucr.edu – My professor

- Increased student grades up to 20% by preparing and leading weekly discussion sessions.
- Assisted in developing course materials and providing technical support during labs.
- Guided students in optimizing ETL processes, improving data integrity by 30%

Research Intern – BitSecurerLab – Riverside, CA Apr 2023 – Dec 2024

- Learned and applied reverse engineering techniques using Ghidra for binary analysis.
- Collaborated effectively within an Agile development team to create an online disassembler.
- Developed a 3D force graph visual in Vue that improved clarity of connected functions & memory objects by 25%.

Relevant Classes Taken

- General – Design and Analysis of Algorithms, Computer Architecture, Concurrent Programming
- AI – Machine Learning, Natural Language Processing, Artificial Intelligence
- Data Analytics – Data Analytics and Exploration, Database Management Systems, Big Data Management
- Cybersecurity – Software Security, Computer Security, Computer Networks