

# 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.

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## 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 2022

## 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](mailto: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](mailto: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