ANDREW SO

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in /in/andrew-chiang-so/

SUMMARY

With six years of programming experience, my expertise spans image processing, data automation, and embedded system design. Notably, I'm equally adept at thriving in collaborative work settings.

SKILLS

Languages: Python, Rust, C/C++, Java, Bash, Batch

Technologies: AWS, GCP, Docker, OOP, OpenCV, Pandas, Numpy, CI/CD, SQL, Django, JQuery, JavaScript, CSS, HPC, Embedded Software

Operating Systems: Linux Ubuntu/Mint, Raspbian, Windows

Soft Skills: Verbal communication, positive attitude, adaptable

EDUCATION

08/2020 - 06/2022 **Master of Science - Computer Science**   **Cal Poly Pomona**

05/2018 - 05/2020 **Bachelor of Science - Computer Science**   **Cal Poly Pomona**

01/2016 - 12/2017 **Associates of Science - Mathematics**   **Riverside Community College - Norco**

EXPERIENCE

8/2022 – Present **Freelance Software Developer**   **Self-Employed**
- Regularly submitted project proposals to secure project commissions.
- Create personal projects in my spare time to enhance skills and explore new ideas.
- Regularly communicated with clients on ongoing progress and conducted feasibility assessments to keep the project on track.
- Developed over six applications, rigorously adhering to version control protocols and adhering to precise client requirements and functional specifications.
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Agile  /  Prototyping  /  Technical Documentation  /  Unit Testing  /  RS232  /  Flask  /
Node.js  /  ESP32 Micro-controllers  /  Selenium  /  REST Api  /  Python
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4/2022 – 10/2022 **Web Developer**   **Code the Spectrum**
- Partnered in a two-person team to handle both front-end and back-end tasks for web content and the event's participant submission page.
- Jointly collaborated with the media committee to design and present the conference information.
- Managed and maintained corespondents from participants and sponsors, with the added responsibility of discerning and filtering non-priority emails for my supervisor.
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Html  /  3rd Party Software Integration  /  Communication  /  Linux  /  Wordpress
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5/2021 – 8/2022 **Graduate Research Assistant**   **Cal Poly Pomona**
- Guided and offered technical assistance to six NSF research students.
- Utilized 4k resolution 3D models to investigate the influence of resolution and stickers on computer vision attacks.
- Trained and rendered multiple viewpoints of adversarial sticker to handle 3D surfaces.
- Investigated the significance of attack success rate to misclassification rate on the transferability of adversarial sticker attack method.
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Technical Writing  /  Latex  /  3d Modeling  /  Computer Vision  /  Encryption  /  Mentor
/  Python
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6/2019 – 5/2020 **Undergraduate Research Assistant**   **Cal Poly Pomona**
- Created realistic 3D models using photogrammetry and Blender for computer vision attack simulations.
- Corrected and simplified mesh models to remove holes and reduce simulation time on texture space attack.
- Trained and tested different encrypted ensemble model, employing various weights and bias in Python and Keras that is then transferred to CryptoNet.
- Summarized the results of various data distribution and analyzed the accuracy and efficiency of the proposed CNN ensemble algorithm.
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Git  /  Unit Testing  /  Photogrammetry  /  Blender  /  Agisoft  /  Homomorphic Encryption
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PROJECTS

Software	**Python Web Service**	https://github.com/MisterSoandSo/Python-Webservice

Developed a Python web service that executed computations prior to responding to client requests, and implemented a console-based user management system for secure HTTPS communication between client and server devices.

Software	**Python Gmail Extractor**	https://github.com/MisterSoandSo/Python-Gmail-Extractor

Customized an email extraction program using the Google Cloud API to download Gmail content. Created Python scripts to implement OCR software for extracting tabular data from images and effectively stored it in an SQL database.

Network Library	**PyAuthCXMLogin**	https://github.com/MisterSoandSo/PyAuthCXMLogin

Developed a Python network library to establish a connection between Python and Xbox Live authentication, addressing the challenge posed by the Mojang authentication service's depreciation in September 2022. Employed Selenium to facilitate login and retrieve Microsoft Authentication Tokens.

PUBLICATIONS

2020 **Xiong A, Nguyen M , So A, Chen T. Privacy Preserving Inference with Convolutional Neural Network Ensemble**
2020 IEEE 39th International Performance Computing and Communications Conference (IPCCC)

2020 **Yao P, So A, Chen T, Ji H. Multiview-Robust 3D Adversarial Examples of Real-world Objects**
CVPR 2020 Workshop

2022 **Oslund S,Washington C, So A, Chen T, Ji H. Multiview Robust Adversarial Stickers for Arbitrary Objects in the Physical World.**
Journal of Computational and Cognitive Engineering 1 (4), 152-158