Emmanuel Gallegos

Research Assistant, Software Engineer, Student

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Professional Summary

Computer Science graduate student and researcher, with research experience in the fields of Artificial Intelligence, Robotics, and Distributed Programming and professional experience as a lead mobile software engineer. Expert knowledge of motion planning algorithms, deep learning, and distributed systems. Passionate about creating technology that will better the world, particularly in the area of combatting climate change.

Education

May, 2023 **M.S. Computer Science (3.94)**, *University of Illinois at Urbana-Champaign*, Champaign, IL.

Dec, 2020 **B.S. Computer Science (4.0)**, *California State University - East Bay*, Hayward, CA.

May, 2019 **A.S. Mathematics, A.S. Computer Science (3.64)**, *Chabot College*, Hayward, CA.

Honors and Awards

2022 **Siebel Scholar** Prestigious scholarship awarded to graduate students from top programs demonstrating outstanding leadership and academic excellence

2021-2022 **UIUC Graduate College Fellow,** Fully-funded Graduate College Master's Fellowship Appointment

2019-2020 **Dean's List,** Member of Dean's List at CSU East Bay (3/3 semesters)

2017-2019 **Academic Honors List,** Member of Academic Honors List at Chabot College (3/4 semesters)

Experience

8/21–Present **Research Assistant**, *Parasol Lab*, Champaign, IL, Research assistant under Dr. Nancy Amato, studying distributed computing for robotics task and motion planning in C++. Current research lies in the implementation of hierarchical parallel planning algorithms in environments with varied and distributed resources..

6/20 – 8/21 **Senior Software Engineer**, *T'ena Health Technologies*, San Francisco (Remote), Android developer and lead software engineer for the T'ena System, a telerehabilitation service that integrates a proprietary smart-wearable in order to allow stroke rehabilitation patients to connect with their clinicians remotely.

5/20 – 1/21 **Research Assistant**, *iLab*, Hayward (Remote), Sponsored by NSF. Research assistant led by Dr. Lynne Grewe to help the public increase situation awareness with respect to Covid-19. Developed a module that used thermal imaging and modern computer vision techniques to identify individuals with a high risk of fever from a mobile platform. This research led to two publications in the 2021 SPIE Defense and Commercial Sensing Conference..

10/19 – 2/20 **Coding Instructor**, *KidzToPros*, Hayward + Castro Valley, Worked as a coding instructor teaching game development to children in after school programs across the east SF Bay Area.

Skills

Areas Parallel Programming, Task+Motion Planning, Computer Vision, Machine Learning, IoT

Languages C++, Python, Java, JavaScript, Bash, Android, HTML/CSS

Tools MPI, OpenMP, STAPL, Docker, TensorFlow, Google Firebase

Publications and Research

[GG+20] Emmanuel Gallegos, Lynne Grewe, et al. "Mobile Head Detection with Thermal Imaging for Skin Temperature Analysis". In: *Great Minds in Stem Conference*. **Poster**, 2020. URL: https://posters.gmis-scholars.org/vf/303.

[Gre+21] Lynne Grewe, Subhangi Asati, Shivali Choudhary, Emmanuel Gallegos, et al. "Health crisis situation awareness using mobile multiple modalities". In: *Signal Processing, Sensor/Information Fusion, and Target*

Recognition XXX. Vol. 11756. International Society for Optics and Photonics. SPIE, 2021, pp. 276–286. DOI: 10.1117/12.2587544.

[GCG+21] Lynne Grewe, Shivali Choudhary, Emmanuel Gallegos, et al. "Low-resolution infrared temperature analysis for disease situation awareness via machine learning on a mobile platform". In: *Signal Processing, Sensor/Information Fusion, and Target Recognition XXX*. Vol. 11756. International Society for Optics and Photonics. SPIE, 2021, pp. 287–299. DOI: 10.1117/12.2587547.