# TUNG LE

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## EDUCATION

**University of Massachusetts Amherst** Expected Winter 2026
Bachelor of Science in Computer Science GPA: N/A
Coursework: *OOP, Calculus I-II, Linear Algebra, *Reasoning Under Uncertainty, Data Structure, Intro Computation**
Activities: NASA Space Apps, CICSOFT, Recreational Math, ACM Machine Learning, HackUMass XI, Hackher413.
* Spring2024

## EXPERIENCE

**Software Developer** Aug 2023 - Present
*BUILD UMass*

- Worked closely with 3000 lines in codebase, resolve team merge conflicts, translate client's objectives into product.
- Built and debugged Serialization System for saving. Optimized loading time by 9%. Analyzed file formats & common data types to design data structure for safely encoded/decoded from disk via JSON or Scriptable Object.

**Junior Designer** May - June 2021
*Autonomous Inc*

- Created motion designs, banners, advertisements, identites using Photoshop & Illustrator for 20+ blog entries.

## PROJECTS

**HoloHands: 3D Navigation with Gestures** Link
*Intuitive 3D navigation & computer control by hand gestures in real-time. Using webcam even it has no depth perception.*

- Annotated data on images, achieved 82% mAP50 model train. Custom logic on Finger Pose to Intents response.

**AI Augmented Lab Assistance** Link
*Educational AR Lab equipped with Multi-Users, Real-time assistance, Tools Recognition.*

- Data annotation on 300 utterances + 20 entities for prototype AI model training, implemented smart search for Implicitly-Described Intents by integrating a SQL database..
- Increased AI model F1 accuracy 52% to 73% through multiple training and evaluation cycles using new labeled data and parameter tuning, reducing Overfitting and improving model Generalization.

**Terraforming Simulation** Link
*NASA Space App Challenge 23. Win $10.000 of NASA Boston AWS Award.*

- Avoided premature optimization, reduce 32% merge conflicts, programmed 3D systems & editor for data input.
- Presented our project virtually, got awarded $10,000 in AWS credit by a panel of industry-leading experts from NASA, Harvard, Silicon Valley startups.

**Blimp - Android App** Link
*Published on Google Play. Currently on Beta (Open) Testing*.

- Wrote scalable code using MVC pattern, achieving loose coupling, reducing component-dependency & code duplication in codebase. Minimized checks and draw calls using events system in Observer Pattern, faster 28 FPS compared to unnecessary property checks in game-loop.
- Implemented Singleton, State Machine, Factory patterns in architecture. Programmed state machines for key in-game systems to modularize over 4000 lines of code.

**ECS Engine** Link
*Basic game engine as a project after finishing self-learned course COMP 4300 by Professor David Churchill.*

- Prototyped 2D game engine from the bottom using C++ and SFML. Achieved comprehensive understanding of game engine internals, optimizing main loop structure and tick rates, implemented Entity-Component-System (ECS) architecture, data-oriented designs for scalable, reusable game development.

## TECHNICAL SKILLS

**Programming: C#**, **Java**, **Python**, **C++**, JavaScript, Typescript, React/Native, MERN Stack, HTML, CSS.
**Tools:** OpenCV, SQL, Unity, Git, OpenGL, AWS, Firebase, NumPy, PyTorch, TensorFlow, Docker, Adobe Suite.
**Personal Website: https://tungle.tech**