

# Jack H. Ursillo

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## EDUCATION

### Santa Clara University

*Bachelor of Science in Computer Science and Computer Engineering*

Santa Clara, CA

*Expected Graduation: May 2024*

### Archbishop Mitty High School

*High School Diploma*

San Jose, CA

*Aug. 2016 – May 2020*

## EXPERIENCE

### Research Assistant - HiveSpy

*Santa Clara University*

February 2022 – Present

*Santa Clara, CA*

- Worked on finding ways to design beehives to make them more efficient and safer for bees
- Analyzed data from beehives using Arduino Boards and relayed the data to the cloud
- Designed sensors to detect the weight of each frame as it reached maximum capacity

### Software Programming Instructor

*Whizara*

January 2022 – Present

*San Jose, CA*

- Taught programming to kids and helped them to comprehend the fundamentals of coding
- Worked with different age groups and helped them to create interactive projects using elements of code
- Fostered a positive learning environment and inspired kids to learn

## PROJECTS

### SF Hacks | *HTML, Firebase, Swift, ExpressJS, Discord API*

March 2021

- Created an app that would allow Esports Organizations to draft players in a more efficient manner
- Used Swift and Google Firebase to manage authentication and used ExpressJS to allow the app to communicate with a Discord Bot
- Implemented a Discord Bot to place players into their respective teams according to specified criteria

### Sparse Matrix | *C, Data Structures, AI*

Sept. 2020 – Dec. 2020

- Developed a program in C capable of running arithmetic processes between multiple user/AI created matrices
- Wrote a subprogram capable of encrypting and decrypting information and storing simulation data in files

### Ping Pong Launcher | *Physics, Breadboarding, C*

Sept. 2020 – Dec. 2020

- Designed and coded a multicomponent machine capable of launching objects in a parabolic motion
- Enabled trajectory adjustment to accommodate variations in target distance and height

### Nanoseed Microfinance | *Marketing, Economics, Statistics, Outreach*

June 2019 – July 2020

- Worked directly with farmers in Ningxia, China and helped them to streamline their business and maximize their profits
- Calculated their yearly incomes and devised strategies to help them maintain a steady revenue flow
- Developed a three year business strategy and forecasted economic growth via business simulation models

## RELEVANT COURSEWORK

**Computer Science:** Data Structures, Advanced Algorithms, Embedded Systems, Fundamentals of Algorithmic Logic, Bitwise Logic and Encryption

**Computer Engineering:** Advanced Circuits, Introduction to Logic Design, Circuits and Logic Gates, Introduction to Computer Engineering

**Math:** Calculus Series, Differential Equations, Discrete Mathematics

**Science:** Kinematics, Gravitation, Harmonic Motion, Electricity and Magnetism, Circuits

## TECHNICAL SKILLS

**Languages:** Java, C/C++/C#, JavaScript, HTML/CSS, Python, Assembly, Verilog

**Frameworks:** Maven, Discord API, React, Node.js, Flutter, Swift

**Developer Tools:** Git/Github, Google Cloud Platform, VS Code, Visual Studio, IntelliJ, Eclipse, PyCharm, Unreal Engine, Unity, Blender

**Technologies:** Arduino/Breadboarding, Autodesk/Fusion 360, FPGA, MATLAB