

# JACOB VALDEZ

## Software Engineer

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@jvboid    JacobFV    in jacob-f-valdez

## EMPLOYMENT

### Software Engineer

#### Motio Inc

June 2022 – Jan 2023    motio.com

- Developed Soterre for Qlik Sense
- Intern June – Aug. Full time SE Aug. '22 – Jan '23

### Student Research Assistant

#### IT Lab, UTA

June 2021 – May 2022    itlab.uta.edu

- Collaborated with research group to evolve and test a flask-based statistical visualization tool CoWiz
- Developed full stack web server MLN-Dashboard using Next-React-GraphQL-Strapi stack

### Student Research Assistant

#### UTA College of Social Work

June 2021 – May 2022    Arlington TX

- Maintained and enhanced multi-platform (iOS and Android) data collecting application MyAmble and web admin dashboard
- Stack: javascript, firebase, flutter (mobile), and vue (admin dash)

### Crew Trainer

#### McDonald's

May 2016 – Mar 2020    Midlothian TX

- Led safety committee and addressed employees during 30-minute monthly safety meetings
- Trained employees on-the-job and formally
- In addition to 4 years of formal education, actively used Spanish on-the-job

## EDUCATION

### B.S. Computer Science

#### The University of Texas at Arlington

June 2020 – Aug 2022    Arlington TX

GPA 3.6/4.0

### A.A.S. in Mathematics

#### Navarro College

Sept 2014 – May 2018    Waxahachie TX

GPA 3.9/4.0; Dual-credit program; 85 hours taken

## ACHIEVEMENTS

2022 Future Texas Business Legend Award Finalist

Texas Business Hall of Fame    Spring 2022  
for Limboid LLC business proposal

Paper accepted

Baltic DB&IS 2022    Spring 2022  
for co-authoring ModViz: A Modular and Extensible Architecture for Drill-Down and Visualization of Complex Data

Broaden and Build Conference Honorable Mention

UTA College of Social Work    Sept 2021  
for presenting work Broadening and Building Beyond Classical Reinforcement Learning

SCRF Honorable Mention + \$100 award

UTA CSE Dept    Spring 2021  
for presenting work Predictive General Intelligence

## CERTIFICATIONS

AWS Certified Machine Learning – Specialty  
AWS    Feb 2022

Google TensorFlow Developer Certification  
Google Developers    April 2021

DeepLearning.AI TensorFlow Developer  
Coursera    Oct 2020

DeepLearning Specialization by  
DeepLearning.AI  
Coursera    Sept 2020

AWS Certified Developer – Associate  
AWS    Mar 2019

AWS Certified SysOps Administrator – Associate  
AWS    Mar 2019

AWS Certified Solutions Architect – Associate  
AWS    Feb 2019

AWS Certified Cloud Practitioner  
AWS    Nov 2018

# PROJECTS

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## The Agent Suite

### Department-Specialized Autonomous Agents

📅 May 2023 – Present

🔗 [homepage](#)

- Stack: supabase, postgres, langchain, sqlmodel, pydantic, fastapi, draftbit, react-native
  - Teammates: Garrett Sheyan & Matt Patternostro
  - WIP. Source available on request.
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## Limboid

### Humanoid robot

📅 Feb 2019 – Present

🔗 [limboid.ai](#)

- Hydraulic actuated, endoskeletal humanoid robot
  - Technologies: 3D Printing, CNC routing, plasma cutting, PCB fab
  - Under construction. Artifacts available on request
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## MLN-Dashboard

### Modular server for data visualization

📅 Oct 2021 – May 2022

🔗 [JacobFV/mln-dashboard](#)  
🔗 [Presentation](#)

- Stack: typescript, react, next.js, GraphQL, Prisma, and later Strapi
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## Jnumpy

### Another autograd/deep learning/RL library

📅 Oct – Nov 2021

🔗 [JacobFV/jnumpy](#)

## 20Q: 20 Questions Android Game

### Android app developer in a 4-person group

📅 June – Aug 2021

🔗 [JacobFV/20Questions](#)  
🔗 [jacobfv.github.io/projects/20Q](#)

- Stack: Android, SQLite, Java, Kotlin
  - Design, development, and testing
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## multigraph-nn

### Dynamic time multi-graph neural network framework

📅 May 2021

🔗 [JacobFV/multigraph-nn](#)

- Stack: Python, tensorflow, keras
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## DesparadosAEye

### chatGPT before chatGPT (but nowhere near as good)

📅 Jan – May 2021

🔗 [kmosoti/DesparadosAEYE](#)

- Stack: Android, SQLite, Java, Kotlin, TFLite, BlenderBot
  - Organized team, general app architecture & development, and MLOps
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## Stanford Open Datathon Group Project

### Performed data science in 5-student international group

📅 Apr 2021

🔗 [jacobfv.github.io/projects/2021\\_SODP](https://jacobfv.github.io/projects/2021_SODP)

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## Home Internet Factory

### CNC router + 3D printer + Raspberry Pi 4 + camera + Internet

📅 Apr 2020

🔗 [jacobfv123.medium.com/industrialautomation-home-bba924a3b2f0](https://jacobfv123.medium.com/industrialautomation-home-bba924a3b2f0)

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## Workplace Surveillance System

### Employee phone detection computer vision system

📅 July 2019

🔗 [JacobFV/Workplace-Surveillance-System](#)

- Stack: web 1.0, tensorflow.js, mobilenet
- Demonstration to employer succeeded identifying employees on their phone, but employer didn't end up purchasing a subscription

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## Big Blender Farm

### AWS Generative Blender Design System Concept

📅 July 2018 – Apr 2019

- Although never completed, became more familiar with Blender python scripting, general animation workflow, web application development, and the internet
- Planned extensively how to use Amazon Web Services (AWS) WAF, API-Endpoints, Lambda, static S3 buckets, CloudFront, and DynamoDB to deliver content and application on a completely serverless architecture

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## SQT-English-to-Spanish-Translator

### Flexible C# Spanish – English translation system

📅 Oct – Nov 2016

🔗 [JacobFV/SQT-English-to-Spanish-Translator](#)

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## Sale Translator

### Basic C# Spanish – English translation system

📅 Oct – Nov 2015

🔗 [JacobFV/Sale](#)

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## Cookie Cutter CNC

### Full stack engineering project

📅 Mar – May 2015

🔗 [jacobfv123.medium.com/cookie-cutter-cnc-923c68932ee6](https://jacobfv123.medium.com/cookie-cutter-cnc-923c68932ee6)

- 36"×36" sheet metal cutter with server and Arduino client control systems:  
🔗 [JacobFV/CookieControl](#)   🔗 [JacobFV/Arduino-CookieControl](#)
- Designed and developed C# .svg parser, toolpath scheduler, and optimizer, Arduino controller with serial protocol and electronics, and CNC machine with electrodischarge machining head.
- Presented on project in May 2015 and June 2016

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## Copyright Calculator

### Scripted conversation bot to help students stay safe

📅 Sept 2014

🔗 [JacobFV/Copyright-Calculator](#)

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## CookieBaker 3D Printer

### Programmable 12×12 2D gantry

📅 Mar – May 2013

🔗 [jacobfvaldez.weebly.com/engineering](https://jacobfvaldez.weebly.com/engineering)

- Learned mechanical engineering basics
- Intended to make a 3D printer, but extruder never added
- Re-attempted project in October 2014 with design modifications

More work [here](#).