# JACOB VALDEZ

## Software Engineer

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🐦 @JacobFValdez  JacobFV  in jacob-f-valdez

# EMPLOYMENT

### Software Engineer

**Motio Inc**

📅 June 2022 – Jan 2023  🔗 motio.com

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

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### 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)

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### 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; graduated Aug 2022

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### 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
**UTA CSE Dept** 📅 Spring 2021
for presenting work *Predictive General Intelligence*

20% Project Presentation Honorable Mention
**FSMS** 📅 May 2013
for presenting the CookieBaker 3D Printer to a 100-person audience

# 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

## 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
- Heavy construction. No end in sight.
- 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

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## 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

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

📅 Apr 2020          🔗 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

- 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

- 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.*