

# Nick Withers

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## EDUCATION

**University of California, Davis** - BS Computer Science

September 2019 - December 2022

GPA: 3.956 - Graduated with Honors

## SKILLS

- C, C++, Java, JavaScript, Python, HTML/CSS, WebGL, GLSL, Haskell, Prolog, Erlang, MATLAB
- Git, Jira, Azure DevOps, TestComplete, Agile Development
- Basic computer architecture
- Critical Thinking, Problem Solving, Effective Written/Verbal Communication

## EXPERIENCE

**Software Test Automation Engineer** - Boeing

August 2023 - Present

- Develop automated test scripts that validate UI/UX functionality
- Develop detailed test plans with cases representing all customer use cases, edge cases and negative test cases
- Collaborate with test team to develop test automation framework in TestComplete for web app testing
- Validate code changes by executing test plans and performing regression testing on bug fixes
- Work with developers and product managers on application changes, defects, impacts, and risks
- Investigate issues reported by customers in the field, internal test engineers, and personal testing
- Create documentation of all related test artifacts

## PROJECTS / COURSEWORK

### **Computer Graphics**

- Built a simple 3D renderer using WebGL which can load any scenes consisting of one or more obj files
- Implemented Phong shading with multiple light sources and texture mapping using normal maps

### **Artificial Intelligence**

- Implemented A\* path search algorithm to navigate down Mt. Saint Helens
- Developed a Connect 4 program using minimax to play against a computer and classmates
- Built and trained a model which used deep Q-learning to play pong

### **Web Programming**

- Created a web-based game based on preferences over user inputted TikTok videos using a SQLite database
- Front-end programming using Javascript, HTML, CSS and server-side programming using Node.js and Express
- Built a React app with servers for API calls and dynamic display of CDEC reservoir data using a calendar picker

### **Computer Vision**

- Implemented functions for filtering and edge detection using MATLAB
- Applied robust homography estimation with Harris corners, SIFT descriptors, and RANSAC for image stitching
- Trained and augmented a deep network using PyTorch to classify the images in the CIFAR10 dataset

### **Cryptocurrency Discord Bot / Personal Project**

- Developed a Python Discord bot that fetches cryptocurrency data from the Live Coin Watch API, responds to user commands, and updates its status with the current token price, refreshing every 30 seconds

## INTERESTS

- Gaming, Blockchain, Generative Art, Golf, Snowboarding, Travel