

# Nicholas Wanner

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## EDUCATION

### TEXAS A&M UNIVERSITY

BS IN COMPUTER ENGINEERING

MINOR IN CYBER SECURITY

May 2021 | College Station, TX

Summa Cum Laude

GPA: 3.94 / 4.0

## EXPERIENCE

## SKILLS

### LANGUAGES

Python • C/C++ • C#

JavaScript • CSS

### TOOLS

Azure • Databricks • Git/Github/Bitbucket/Gitlab

ONNX • Numpy • Pandas

GraphQL • MongoDB PyTorch • Tensorflow

### DELL | SOFTWARE ENGINEER, CTO SOFTWARE PoC TEAM

June 2022 - Present | Austin, TX

- Spearheaded an AI/ML model optimization initiative using ONNX Runtime and advanced quantization tools, achieving a Y% improvement in model performance and efficiency for targeted hardware applications.
- Assisted in building an MLOps pipeline in Databricks, migrating model data and introducing data/model drift detection to monitor performance.
- Secured five patents in wireless tech and HID innovations, including WiFi meshes, gaming router optimizations, and touchpad controls.
- Investigated and implemented advanced networking solutions to minimize gaming latency jitter, elevating user experience for performance-critical applications.
- Supported developing embedded code for the 'NYX' wireless PC controller, showcased at CES 2022, enhancing user experience and connectivity.
- Contributed to a PoC project aimed at refining workstation setups, crafting an algorithm that recommends peripheral configurations based on user preferences and system capabilities.

### DELL | SOFTWARE ENGINEER, CTO TECH STRATEGY TEAM

June 2021 - June 2022 | Austin, TX

- Spearheaded the investigation and proof-of-concept for a proprietary Bluetooth pairing solution for Dell devices, streamlining connectivity and setting a new standard in device pairing experiences.
- Contributed to developing ML-driven dynamic thermal management systems, achieving a 12% boost in efficiency and 15% longer battery life by adapting system thermals to workload demands.
- Engineered a data collection framework to streamline gathering of training data and assess system setting impacts.
- Collaborated with data scientists to define workloads and key data metrics, playing a pivotal role in models that adapt system performance to real-time user needs.
- Collaborated with vendors and stakeholders in the design and integration of advanced camera technologies for new product incubations, enhancing client system capabilities.

### DELL | SOFTWARE ENGINEER INTERN

June 2020 - Aug 2020 | Austin, TX

- Led the design of a novel touchpad technology prototype using C# and .NET, significantly enhancing user interaction and efficiency, and accelerated the project timeline from over two years to just one, expediting time to market.
- Pioneered the touchpad technology that led to a successful patent filing, underlining its innovation and value as intellectual property.
- Conducted research and user studies for pen-on-touchpad technology, evaluating multiple pen technologies and establishing KPIs for project success.

### TEXAS A&M | PEER TEACHER

June 2019 - Aug 2019 | College Station, TX

- Taught *Intro to Computer Systems* to a class of 35 students, effectively communicating core concepts and fostering a collaborative learning environment.
- Designed and tailored lesson plans to accommodate diverse learning styles, promoting both individual and group engagement.

### THOUGHT TRACE | DATA SCIENCE INTERN

Jan 2018 - Aug 2018 | Houston, TX

- Developed web applications to streamline machine learning data labeling and QA processes, enhancing data accuracy and efficiency.
- Created a comprehensive ontology for front-end UI validation, improving application reliability and user experience.
- Actively participated in SCRUM meetings and collaborated with data scientists on problem-solving, contributing to a cohesive team dynamic and project success.

## PROJECTS

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### **MULTI-INSTRUMENTAL TACTILE SYNTHESIZER (MITS) | TOOLS: ARDUINO, SWIFT, REAPER (DAW)**

Developed "Multi-Instrumental Tactile Synthesizer" (MITS) gloves that convert hand gestures into musical instrument sounds, utilizing Arduino and DAW software, demonstrating innovative application of gesture recognition and sound synthesis.

### **RECEIPT READER | TOOLS: NODE JS, HTML, CSS, GOOGLE APIs**

Engineered a web application for receipt management that allows users to authenticate via Google Identity, upload receipt images, and utilize Google's Vision OCR for text extraction. Implemented a parsing service to delineate items and costs, facilitating user validation before aggregating data into a Google Sheets spreadsheet for long-term tracking and analysis.