Nicholas Wanner

nickrwann@gmail.com | 832.349.0727 | www.linkedin.com/in/nick-wanner

EDUCATION

TEXAS A&M UNIVERSITY
BS in Computer Engineering
Minor in Cyber Security
2021 | College Station, TX
GPA: 3.94 / 4.0 (Summa Cum Laude)

SKILLS

Languages:	C/C++, Python, C#, JavaScript, CSS
Databases:	SQL, NoSQL (e.g., PostgreSQL, MongoDB)
Web Dev:	ASP.NET, Vue.js, Express
DevOps:	Git, Docker, Kubernetes, Azure
Machine Learning & AI:	Tensorflow, Huggingface, ONNX Runtime
Other:	WSL, Databricks, Anaconda

EXPERIENCE

DELL | Software Engineer
CTO Software PoC Team | 2022 - Present | Austin, TX

- Led a config-driven AI/ML optimization project with ONNX Runtime and quantization, enhancing model speed and reducing storage by 50% on client devices, facilitating automated optimization for data scientists.
- Designed and implemented adaptable MLOps templates and platforms on Databricks, reducing setup complexity by 30% for data-centric roles along with drift detection to automate retraining at 10% drift thresholds, ensuring consistent accuracy.
- Secured five patents in wireless and HID tech, including WiFi meshes and gaming router enhancements.
- Enhanced gaming experiences by minimizing latency jitter with advanced networking solutions for critical applications.
- Developed embedded code for 'NYX' wireless PC controller, improving user experience and connectivity at CES 2022.
- Developed a PoC for better workstation setups, creating an algorithm for optimal peripheral configurations.

CTO Tech Strategy Team | 2021 - 2022 | Austin, TX

- Led Dell Bluetooth mouse pairing solution PoC, eliminating UI interaction and cutting pairing time by over 50%.
- Aided in creating ML-driven thermal management, improving compute efficiency by 12% and extending battery life by 15%.
- Implemented an automated data collection framework, tripling output (3x) and streamlining new test workload integration.
- Collaborated with data scientists on defining workloads and metrics, crucial to models adapting performance to user needs.

DELL | Software Engineer Intern
CTO Tech Strategy Team | 2022 | Austin, TX

- Led touchpad prototype design, significantly boosting user interaction, efficiency, and halving time to market.
- Pioneered touchpad technology leading to a patent, highlighting its innovation and intellectual value.
- Conducted research on pen-on-touchpad technology, evaluating pen types and establishing KPIs.

THOUGHT TRACE | Data Science Intern
Core Insights Team | 2018 | Houston, TX

- Developed a web app for real-time machine learning data labeling and QA, boosting process efficiency by over 30%.
- Created an ontology for dynamic UI validation, automating NLP label integration and cutting manual updates by 75%

TEXAS A&M | Peer Teacher
Dept. of Electrical Engineering | 2019 | College Station, TX

- Instructed 30 students in an accelerated 8-week *Intro to Computer Systems* course, condensing semester content by 50%.
- Adapted weekly lesson plans for diverse learning styles, boosting student engagement and participation.
- Conducted biweekly and on-demand one-on-one office hours, enhancing individual performance.

PROJECTS

MULTI-INSTRUMENTAL TACTILE SYNTHESIZER (MITS) | Arduino, Swift, Reaper (DAW)
Gloves that convert hand gestures into musical instrument sounds, utilizing Arduino and DAW software, demonstrating gesture recognition and sound synthesis.

RECEIPT READER | Node JS, HTML, CSS, Google APIs
Web app enabling users to authenticate, upload receipts, and extract data with OCR, with seamless Google Sheets integration for expense tracking and analysis.

PATENTS AND INNOVATIONS

DYNAMIC WIRELESS NETWORK OPTIMIZATION

Engineered a dynamic wireless coverage enhancement solution using an edge hub to map user locations and adjust network device placement and beam steering.

INTELLIGENT NETWORK RESOURCE ALLOCATION

Developed a system on the Nyx platform to intelligently prioritize network resources based on user profiles and activities, improving efficiency in multi-user environments.

WI-FI CLUSTER MANAGEMENT FOR DENSE NETWORKS

Created a system to manage dense Wi-Fi networks through dynamic clustering of devices to optimize spectrum use and reduce interference.

WI-FI SPATIAL DENSITY MANAGEMENT FOR AD-HOC NETWORKS

Introduced a self-configuring system for high-density Wi-Fi networks that autonomously manages wireless channels and bandwidth using dynamic allocation and interference management.

TOUCHPAD DESIGN WITH ILLUMINATED COLLABORATION BUTTONS

Developed an innovative touchpad design incorporating illuminated collaboration buttons for conferencing applications, enhancing user interaction and meeting efficiency.

COLLABORATION TOUCHPAD WITH INTERACTIVE CONTROLS

Patented a Collaboration Touchpad with illuminated conferencing shortcuts integrated directly into the touchpad surface to boost productivity during virtual meetings.