

# Todd H. Albert, Ph.D.

## VP of Application Development

30+ years Coding • 15+ years Leadership (iD) • 20+ years Data Science, AI, ML

Boca Raton, FL

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## Professional Experience

### VP of Application Development

Jan 2024 – Sep 2024

*Site Impact, Coconut Creek, FL*

- Oversaw and led in-house and off-shore development teams, Data Science team, QA team, external DevOps and DevSecOps team, contractors, vendors with a \$3.6M annual budget.
- Created and presented Board Decks quarterly, took part in quarterly executive business and strategy plannings, presented at quarterly Town Halls, created and monitored SMART goals for my direct reports, held 1-on-1 meetings with reports, responsible for communication up and down chain, and participated in **Senior Leadership Training and Assessments** (I'm an iD; DiSC Assessment available upon request)
- Reworked process with off-shore team to increase velocity by almost 5x saving the company an estimated \$2.7M; also doubled our internal velocity.
- Developed, along with product, a process to go from idea to epic to production
- Presented new ways to utilize AI in our company, both for our clients and internal communication and planning
- Led architecture of platforms, AI model development, for end-to-end SaaS platform for Ad Management, placement, in-flight management, AI-based smart proposals, and reporting and analytics with an expected \$50M revenue by 2026.
- Brought project on track after 2 ½ years of failed deadlines and 4 launch failures saving an estimated \$4.3M project cost.
- Simplified architecture resulting in lower cloud bill, simpler developer experience, easier maintenance, and less reliance on 3rd party, also saving an estimated \$600k/yr.

### VP of Engineering

Jan 2020 – Feb 2024

*Edgy Nerd, Boca Raton, FL*

- Product Lead, Sales, Architect, Data Engineer, and Principal Software Engineer
- Led architecture, data engineering, and development of a **nationally-recognized AI diarization app** for the Deaf and Hard-of-Hearing Community
- Built custom P2E VR game in 3 months, innovating new way to change NFT attributes via gameplay
- Utilized **Gen AI** to create tens of thousands of iterations of NFT artwork
- Selected Clients: MyPhoto, Premier Virtual, Frenchie Ballers (Web3), Koda / Imanyco (**AI**), Imagynate, RaiseLink (**AI**), Magic City Cup, RentBunny
- Led a team to design, develop, and launch a fully-accessible mobile dating application, including authentication, subscription-based payment processing, **Gen AI** text to speech, speech to text, and image to text capabilities, real-time text-based chat and telephony, proprietary **AI personality matching** using vector search, and push-based notification system
- Led product design, development, and architecture of two mobile photography apps with Sony, Muñoz Photography, and LVL Up Imaging

### Interim CTO and Lead Engineer

Oct 2023 – Jan 2024

*Hemp Temps, Lighthouse Point, FL*

- Recruited and hired a team of engineers and lead the initial development and product design of the staffing and learning platform for the cannabis industry
- Recruited the full-time CTO

### CTO and Lead Engineer

Jan 2020 – Oct 2023

*Boca Code, Boca Raton, FL*

- Issued 300 certificates including 150 new software engineers with a 90% placement rate and over \$30k average increase in salary per graduate
- Lead courses and created curriculum for Software Engineering, Game Development with AR and VR, React, Node.js, Data Science, Machine Learning, and AI including building and training LLM models using NLP
- Led transformation of public website and internal software to Next.js and Tailwind in under 24 hours each

### Head Software Engineer

Apr 2017 – Sep 2020

*MyPhoto (Polaroid Photo Bar), Delray Beach, FL*

- Led architecture, data engineering, design, development, and deployment of a custom e-commerce platform in under 6 months; led transformation from PHP to Node.js and React
- Migrated to multi-cloud infrastructure with industry-leading performance while increasing **conversion rate from 2 to 10%** and cut bounce rate in half
- Automated production processes to cut production time by 66% and increase productivity **10x using AI and computer vision** technology built with Python, React-Native, and Electron
- Invented "instant upload" technology to speed up and enhance user experience

### CTO and Head Software Engineer

May 2015 – Apr 2017

*Nebular Agency, Boca Raton, FL*

- Designed and developed software platforms, games, apps, and experiences for: PBS Kids, AES, AccuWeather Ally Bank, Barefoot Wine, Fiat, JetRide, Magna, Sprint, CIREs, BGsU, Jetride, WallKeepers, Eight O'Clock Coffee, BenTek, Mack Industrial, the field, Source Marketing, Quote Logic, Modern Promos, Sun Country Airlines, George P Johnson, EEI, Amway, and dozens more
- Developed the industry-leading Photo booth platform with over \$5M SaaS revenue

### Lead Software Engineer

Aug 2012 – May 2015

*MadValorem, Boynton Beach, FL*

- Single-handedly rebuilt \$1.5M platform and infrastructure in first 3 weeks, cutting cloud costs by over 90% and increasing speeds by 20x
- Solved complex mapping issue by week 5 that 12 other engineers failed to solve
- Automated development of millions of professional profiles and property pages using **AI**, specifically **GenAI**, **NLP** and **LLM**; pages each ranked in top 3 Google search results, enabling our sales team to win 90% of sales
- Invented **NLP AI** process for call center leads which increased conversion from 40% to 97%

### Instructor

Jun 2012 – Aug 2012

*University of Miami*

## Head of Meteorology Program

Aug 2009 – May 2012

*University of Tennessee at Martin*

- Developed first Meteorology BA and BS programs in the state and got curriculum approved at state level in first semester

## Scientific Grant Evaluator

Jan 2008 – Dec 2010

*NASA, Washington, DC*

- Served on a committee to evaluate grants for scientific merit and contribution and voted on which grants were funded

## Instructor

Aug 2007 – May 2009

*Bowling Green State University, Bowling Green, OH*

- Increased number of majors in the department from 8 to over 80 in first year
- Designed and developed Software for Department and Departmental Webpages

## Adjunct Instructor

Aug 2004 – May 2007

*Tallahassee Community College, Tallahassee, FL*

## Lead Teacher and Science Coordinator

Aug 2004 – May 2007

*Cornerstone Learning Community, Tallahassee, FL*

## Research Fellow

Jun 2001 – May 2004

*CIRES, University of Colorado, Boulder, CO*

- Designed, engineered, built, programmed, and installed “Smart Stake” autonomous surface monitoring stations for NASA and deployed and maintained along with the Greenland Climate Network (GC-Net) of Autonomous Weather Stations (AWS) for NASA on the Western slope of the Greenland Ice Sheet
- Designed and developed a “Smart Kiosk” for CIRES in collaboration with NOAA and the University of Colorado using Flash and ActionScript

## Education

Florida State University, **Ph.D.**

May 2007

University of Colorado, **NASA Research Fellow**

Aug 2001 – Aug 2004

The Ohio State University, **M.S.**

Dec 2000

University of Florida, **B.S.**

May 1998

## Grants and Awards (selected)

Golden Palm Award Nominee (2 categories)

2023

Venture Appreciation Night Award

2023

Outstanding Reference Source, *American Library Association*

2011

NSF TN-SCORE, *Co-Principal Investigator*

2011

UTM Center for Excellence, *Co-Principal Investigator*

2010

West-Tennessee Mesonet, *Co-Principal Investigator*

2009

CIRES Innovative Research Grant, *Co-Principal Investigator*

2002 – 2003

NASA Graduate Research Fellowship, *Principal Investigator*

2001 – 2004

## Leadership and Service (selected)

SoFlo Dev Con Organization Committee, *South Florida Tech Hub*

2024

Mentor, *FAU Tech Runway*

2024

Interim CTO and Advisor, *BundleIQ*

2021 – 2023

Tech Talent and Education Committee Board, *South Florida Tech Hub*

2020 – present

Bootcamp Subcommittee Chair, *South Florida Tech Hub*

2020 – 2024

Hackathon Organizer, Judge, and Coach

2017 – present

Future of Reelfoot Lake Faculty Advisory Committee

2010 – 2012

GIS Certificate Faculty Committee, *University of Tennessee at Martin*

2009 – 2012

Departmental Web-development Committee, *University of Tennessee at Martin*

2009 – 2012

Undergraduate Advisor, Meteorology and Geography, *University of Tennessee at Martin*

2009 – 2012

Faculty Advisor, GeoClub, *University of Tennessee at Martin*

2009 – 2012

Undergraduate co-advisor, Department of Geography, *Bowling Green State University*

2008 – 2009

Faculty Advisor, Geography Club, *Bowling Green State University*

2007 – 2009

## Publications (selected)

Albert, T.H., 2021, Deploying an Express API to Google App Engine, <https://medium.com/boca-code/deploying-an-express-api-to-google-app-engine-ac7a188c6608>

Albert, T.H., 2021, Deploying an Express API on Firebase Hosting, <https://medium.com/boca-code/the-basic-process-is-that-we-will-use-firebase-cloud-functions-to-create-a-single-function-app-13ba3b852077>

Albert, T.H., 2021, Creating an Express API Step-by-step, <https://medium.com/boca-code/creating-an-express-api-step-by-step-cb7b9aab7b6>

Albert, T.H., 2021, Why does talent leave South Florida, <https://medium.com/boca-code/why-does-talent-leave-south-florida-b7cbc5339e83>

Albert, T.H., 2021, When to fire a client, <https://toddhalbert.medium.com/when-to-fire-a-client-9c56989d98f3>

Albert, T.H., 2021, Women in Tech, <https://medium.com/boca-code/women-in-tech-49861db01e82>

Albert, T.H., 2021, Frustrating loops, <https://toddhalbert.medium.com/frustrating-loops-a3d3df84415b>

Albert, T.H., 2021, The scary leap of changing careers, <https://todddhalbert.medium.com/the-scary-leap-of-changing-careers-11dd29c488f5>

Albert, T.H., 2021, Pumped! Scholarship Awards, <https://todddhalbert.medium.com/pumped-scholarship-awards-7c2b78d87e17>

Albert, T.H., 2021, Our first cohort – reflecting on the last 10 weeks... and 15 months, <https://medium.com/boca-code/our-first-cohort-reflecting-on-the-last-10-weeks-and-15-months-17118552ab6c>

Albert, T.H., 2021, More jobs than coders — Boca Code rises to the challenge, <https://todddhalbert.medium.com/more-jobs-than-coders-boca-code-rises-to-the-challenge-fc75e1b47802>

Albert, T.H., 2021, No, Alexa is not listening to you, <https://todddhalbert.medium.com/no-alexa-is-not-listening-to-you-2b173519996b>

Albert, T.H., 2020, Why I Switched from Kubernetes to Firebase Hosting, <https://todddhalbert.medium.com/why-i-switched-from-kubernetes-to-firebase-hosting-ae1fdac62439>

Albert, T.H., 2018, The Online Dating Algorithm, <https://medium.com/nebular-agency/the-online-dating-algorithm-38a7f63bb8f1>

### Peer Reviewed (selected)

Albert, T.H., 2016, C. Huggel, A. Racoviteanu, Y. Arnaud, W. Silvero, and A. Klein, Northern Andes, in Global Land Ice Measurement from Space, edited by J. Kargel

Albert, T.H., 2010, Glaciers: Continental, in *Encyclopedia of Geography*, edited by B. L. Warf, Sage Publishing. **Winner of "Outstanding Reference Source" award by the American Library Association.**

Albert, T.H., 2002, Evaluation of remote sensing techniques for ice-area classification applied to the tropical Quelccaya Ice Cap, Peru, *Polar Geography*, 26 (3), 210-226.

Albert, T.H., 2008, Assessment of glacier mass balances from small tropical glaciers to the ice sheet of Greenland, VDM Verlag Dr. Mueller e.K., Saarbrücken, Germany, 160 pp..

Albert, T.H., 2007, Assessment of glacier mass balances from small tropical glaciers to the large ice sheet of Greenland, Ph.D. Dissertation, Florida State University, Tallahassee, Florida.

Albert, T.H., 2004, Measuring and modeling surface height changes on the Greenland ice sheet: Pâkitsoq ablation zone, west-central Greenland, pp. 37, University of Colorado, Boulder, Colorado.

Steffen, K., N. Cullen, R. Huff, S. Starkweather, T.H. Albert, and M. McAllister, 2004, Variability and forcing of climate parameters on the Greenland Ice Sheet: Greenland Climate Network (GC Net), pp. 30, University of Colorado, Boulder.

Steffen, K., N. Cullen, R. Huff, S. Starkweather, and T.H. Albert, 2003, Variability and forcing of climate parameters on the Greenland ice sheet: Greenland Climate Network (GC-Net), pp. 29, University of Colorado, Boulder.

Albert, T.H., 2002, A high-resolution ablation study near Illulisat (Jakobshavn) on the Greenland Ice Sheet, pp. 10, University of Colorado, Boulder, Colorado.

Steffen, K., J.E. Box, N. Cullen, and T.H. Albert, 2002, Variability and forcing of climate parameters on the Greenland Ice Sheet: Greenland Climate Network (GC Net), pp. 22, University of Colorado, Boulder.

Steffen, K., J.E. Box, N. Cullen, and T.H. Albert, 2002, Greenland ice sheet climatology and surface energy balance modeling: Greenland climate network (GC-Net), pp. 24, University of Colorado, Boulder.

Albert, T.H., 2000, Investigations of the recent changes on the tropical Quelccaya Ice Cap, Peru, Masters thesis, Ohio State University, Columbus, Ohio.

### Skills (selected)

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|---------------------|-------------------------------|---------------|----------------------|-----------------------|
| • Agile             | • Data Analytics              | • Java        | • PostgreSQL         | • Swift               |
| • AI                | • Docker                      | • JavaScript  | • Product Leadership | • Systems Engineering |
| • Arc               | • Elastic Search              | • Laravel     | • Project Architect  | • Tailwind CSS        |
| • Augmented Reality | • Electron                    | • ML          | • Python             | • Terraform           |
| • Automation        | • Expo                        | • Mongo       | • React              | • TypeScript          |
| • AWS               | • Express                     | • MySQL       | • React Native       | • Unity               |
| • Azure             | • Firebase                    | • .Net        | • Redis              | • Virtual Reality     |
| • Bash              | • Firestore                   | • NFTs        | • Rust               | • Vue                 |
| • Blockchain        | • Game Development            | • Node.js     | • Serverless         | • Web3                |
| • C#                | • GIS                         | • Next.js     | • Smart Contracts    |                       |
| • C++               | • Git                         | • Objective-C | • Solidity           |                       |
| • Cloud Engineering | • Google Cloud Platform (GCP) | • PHP         | • SQL                |                       |
| • CloudFormation    |                               | • PostGIS     | • SQLite             |                       |