Samuel W. Albert, PhD

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Active Top Secret security clearance

Summary

Sam Albert is an aerospace engineer and outdoor enthusiast living in the Mt Pleasant neighborhood of Washington, DC.

Active Top Secret security clearance

Education

PhD **University of Colorado Boulder**, Aerospace Engineering Sciences — Boulder, CO, USA
Advisor: Dr. Hanspeter Schaub — May 2020 – Sept 2023

- *Aerocapture, Entry, and Co-Delivery in Uncertain Planetary Atmospheres*
- Developed novel concepts for multi-probe planetary science missions
- Improved onboard guidance for discrete-event drag-modulated aerocapture
- Derived relative motion models in velocity frame for hyperbolic entry
- Applied reduced-order models of uncertainty to atmospheric density variability for onboard uncertainty quantification and covariance prediction

MS **University of Colorado Boulder**, Aerospace Engineering Sciences — Boulder, CO, USA
Advisor: Dr. Bobby Braun — Aug 2018 – May 2020

- Graduate Certificate in Astrodynamics and Satellite Navigation Systems
- Developed proposal for dual-CubeSat mission to investigate thermospheric density enhancements in polar cusps due to electron precipitation
- Additional coursework in hypersonics, science and technology policy

BS **Purdue University**, Aeronautical and Astronautical Engineering — West Lafayette, IN, USA
Honors College Graduate — Aug 2014 – May 2018

- Minor: Global Engineering Studies
- Exchange semester at Universidad de Carlos III, Madrid, Spain

Experience

Company C, Summer Intern — Livingston, LA, USA
June 2024 – Sept 2024

- Developed deep learning models for the detection of gravitational waves in LIGO data
- Published 3 peer-reviewed research papers about the project and results

Company B, Summer Intern — Ankara, Türkiye
June 2023 – Sept 2023

- Optimized the production line by 15% by implementing a new scheduling algorithm

Company A, Summer Intern — Istanbul, Türkiye
June 2022 – Sept 2022

- Designed an inventory management web application for a warehouse

Projects

Example Project — May 2024 – present

A web application for writing essays

- Launched an iOS app in 09/2024 that currently has 10k+ monthly active users
- The app is made open-source (3,000+ stars on GitHub)

Teaching on Udemy — Fall 2023

- Instructed the "Statics" course on Udemy (60,000+ students, 200,000+ hours watched)

Skills

Programming: Proficient with Python, C++, and Git; good understanding of Web, app development, and DevOps

Mathematics: Good understanding of differential equations, calculus, and linear algebra

Languages: English (fluent, TOEFL: 118/120), Turkish (native)

Publications

3D Finite Element Analysis of No-Insulation Coils Jan 2004

Frodo Baggins, ***John Doe***, Samwise Gamgee

10.1109/TASC.2023.3340648

Extracurricular Activities

- There are 7 unique entry types in RenderCV: *BulletEntry*, *TextEntry*, *EducationEntry*, *ExperienceEntry*, *NormalEntry*, *PublicationEntry*, and *OneLineEntry*.
- Each entry type has a different structure and layout. This document demonstrates all of them.

Numbered Entries

1. This is a numbered entry.
2. This is another numbered entry.
3. This is the third numbered entry.

Reversed Numbered Entries

3. This is a reversed numbered entry.
2. This is another reversed numbered entry.
1. This is the third reversed numbered entry.