James Hager

Box Elder, SD, 57719 | 720-219-4248
James.Hager.Developer@gmail.com

iOS & macOS App Developer

Github | Bitbucket | LinkedIn | Portfolio

EDUCATION

Devmountain, Lehi, UT   *Jan 2022 – May 2022*
iOS App Development Bootcamp

University of Illinois at Urbana-Champaign, Urbana, IL   *Jan 1991 – May 1994*
Ph.D. in Aeronautical and Astronautical Engineering

- Focus: Computational Fluid Dynamics (CFD)
- Dissertation: "Solution Acceleration and Accuracy Improvements for Navier-Stokes Solvers"

University of Illinois at Urbana-Champaign, Urbana, IL   *Aug 1989 – Jan 1991*
M.S. in Aeronautical and Astronautical Engineering

- Thesis: "Numerical Examination of the Thermophoretic Effect on the Laser Tomography Image of a Plane Flame"

Georgia Institute of Technology, Atlanta, GA   *Sep 1985 – Jun 1989*
B. of Aerospace Engineering with Highest Honor

- Chief Engineer of senior design group

SKILLS

- **iOS/macOS:** Swift, Cocoa, UIKit, CoreData, XCTest, Objective-C
- **Web:** CSS, HTML, JavaScript, Node, PHP, MySQL, PostgreSQL
- **Data:** Python, JSON, XML
- **Version Control:** Git, Github, Bitbucket, Sourcetree
- **Environments:** Xcode, Unix, Terminal, vi, Apache, Heroku, Rollbar, Postman, SQL Tabs

PROFESSIONAL EXPERIENCE

Devmountain, Lehi, UT   *Jan 2022 – Present*
iOS App Development Student

- Remote pair programming experience

Contacts … a website | GitHub repo | website

- Technology: JavaScript, NodeJS, Axios, ExpressJS, Sequelize, BcryptJS, PostgreSQL
- Each contact can have an arbitrary number of phone numbers, email addresses, and physical addresses
- Responsive design

Avanti Applications, Box Elder, SD | website   *Feb 2016 – Present*
Owner and Chief Developer

- Developed iOS and macOS apps using Swift, UIKit, Cocoa, and CoreData

AWeather … an iOS App | website | screen shots

- Technology: Swift, UIKit, CoreData, CoreLocation, MapKit, CryptoKit, XCTest
- Obtains weather data from the National Weather Service APIs (forecast and warnings) and image repositories (radar & satellite)
- Uses a RESTful API (PHP & MySQL) to: 1) report errors with the data feed, and 2) obtain weather-icon composition data for automatic over-the-air app updates

ANotes … an iOS and macOS App | screen shots

- Technology: Swift, UIKit, Cocoa, CoreData, MultipeerConnectivity
- A notes app that can sync data between devices w/o an internet connection
- Uses a common framework for the basic functionality that's shared between the iOS and macOS apps
- The sync function uses a vector clock and never loses data — if there's a sync conflict, both sets of data are combined and formatted to indicate that there was a sync conflict

Avanti Web House, Box Elder, SD | website   *Apr 2006 – Present*
Owner and Chief Developer

- Developed dynamic websites using PHP, MySQL, and JavaScript

Mile High Wildlife Photo Club … a website | mhwpc.org

- Public area provides information about the club and galleries of winning competition images.
- Secure members' area: 1) to upload monthly competition images, 2) for admin control
- The website automatically sends meeting and competition email notices to members

RV Ramblings … a website | RVRamblings.com

- The blog system was set up so that entries could be created locally when away from the internet, then the necessary data was exported to an XML file, and then imported into the live site

Great American Electric, Englewood, CO   *Sep 2021 – Dec 2021*
Electrician: Retail New Construction

- Acting foreman for last three weeks before passing Final Inspection
- Company shut down unexpectedly

Blueprint Skilled Services, Lakewood, CO   *Aug 2020 – Sep 2021*
Electrician: Multi- and Single-Family New Construction

- Frequently led a small team

Rocky Mountain Solar & Wind, Colorado Springs, CO   *Aug 2019 – Dec 2019*
Lead Installer: Residential solar-electric systems

- Installed new systems and troubleshot existing systems

James Hager Photography, Box Elder, SD | website   *Jan 2004 – Apr 2018*
Freelance Nature Photographer

- Created wildlife and landscape images from the US and around the world
- Led photo tours in the US and Africa

The Boeing Company (& McDonnell Douglas), Long Beach, CA   *Jun 1994 – Mar 2001*
Sr. Engineer/Scientist, High Speed Aerodynamics Group

- Developed, modified, and applied Computational Fluid Dynamics (CFD) flow solvers and numerical optimization codes

NASA High Speed Research Program

- Created a design-optimization program by coupling the CFL3D flow solver with a grid-perturbation scheme and the DOT design optimization tool

DARPA Affordable Rapid Response Missile Demonstrator Program

- Solved a pitch stability issue with the initial design of the ARRMD vehicle by performing parametric geometry variations and analyzing the performance using CFL3D

PATENT

Non-Waisted Fuselage Design for Supersonic Aircraft, No. 5,899,413