Joey **Mckenzie**

Data Analyst · Software Engineer

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```
> Console.WriteLine("Hello world!");
```

Education

San Diego State University   *San Diego, CA*

B.S. Astrophysics, Mathematics Minor   *May 2016*

- Coursework included training in scientific computation, procedural and object-oriented programming, advanced mathematics and physics, data structures, and numerical algorithms

Experience

Freelance Software Development   *Sacramento, CA*

Web Application Engineering   *May 2017 - Present*

- Developing applications for clients written in C# with ASP.NET Core using both MVC and SPA web architectures
- Utilizing frontend technologies in Angular 2+, Typescript, and Bootstrap4
- Leveraging .NET CMS frameworks to customize client websites to support ongoing media creation
- Deploying software projects using Azure while providing continuous integration and development to clientele

Engility Corporation   *Sacramento, CA*

Operations Research Analyst   *Sept. 2016 - May 2018*

- Provided contractor support for SPAWAR 1.0 Finance Division in the form of data analysis and systems engineering
- Performed regression analysis and statistical programming in R on select datasets
- Extensively used of Excel and R for data reporting and high level graphical analysis and exploration
- Wrote Visual Basic within Excel to perform spreadsheet specific functionality to assist with algorithmic computation
- Built databases in Access for in depth analysis of data to further query and manipulate with SQL

Mathnasium   *San Diego, CA*

Lead Math Instructor   *Aug. 2014 - Sept. 2016*

- Taught mathematics from pre-algebra to calculus and differential equations
- Oversaw up to 30 students while maintaining a productive learning environment
- Worked within a classroom environment to enhance student grades and mathematical intuition

Skill Set

Programming & Scripting Languages

Competency in object-oriented and procedural design:

- Proficient in: C#, JavaScript, HTML5/CSS3, SQL, R, VBA
- Knowledgeable in: Python, Java, Fortran, Bash, C/C++

Libraries, Frameworks & Databases

Knowledge & Continual studying of:

- Web: ASP.NET Core, jQuery, Bootstrap, Angular/TypeScript
- Web Tech/Design: MVC, SPA, AJAX, REST, JSON, XML
- Databases: SQL Server, Entity Framework Core, T-SQL
- Unit Testing: NUnit, MS Test

Operating Systems & Development Environments

Knowledge of relevant technologies:

- OS: macOS, Windows 7/8.1/10, and Linux (Ubuntu)
- Editors: Rider/ReSharper, Visual Studio, VS Code
- Tech: UNIX command line, Git, Postman
- Cloud Platforms: Heroku, Azure

Projects

Web Applications

Listed on GitHub and Portfolio Site:

- Budget analyzer for Sacramento built with ASP.NET Core and SQL Server
- Beer/brewery DB built with ASP.NET Core, Angular 4, and BreweryDB API
- Craft brewery statistics app built with Angular and the ZingChart JS library
- Portfolio website built with HTML5/CSS3, JavaScript, and jQuery

Data Analysis and Photometry of Binary Star V40 in NGC 7789

Senior thesis project:

- Performed data reduction of V40 binary using astronomical software (IRAF)
- Wrote analyses scripts in Fortran to compute binary light curves
- Worked in Ubuntu with terminal CLI for basic system administration

Computational Exploration of the Semi-Empirical Mass Formula

Nuclear Physics Final Project:

- Used the SEMF to calculate binding energies of atomic nuclei
- Wrote data analysis code and simple sorting scripts in Fortran
- Used GNU graphical software to replicate shell model structure