## **Lucas K. Welch**

2631 Augusta, Tustin, CA 92782

(714) 866-8283 • lucaswelch7@gmail.com

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**EDUCATION**

**Claremont Graduate University, Claremont, CA December 2025**

*Master of Science in Financial Engineering & Mathematics*

**Claremont McKenna College, Claremont, CA May 2025**

*Bachelor of Arts in Data Science & Economics (Dual Major)*

* Relevant Coursework: Data Science, Data Structures & Algorithms, Discrete Mathematics, Linear Algebra
* Awards: Harvey Mudd College 2022 Startup Winner, Most Valuable Pitcher, Breakthrough Athlete CMS

**Budapest University of Technology and Economics, Budapest, Hungary Fall 2023**

*Computer Science & Mathematics*

* Big Data, Combinatorial Optimization, Applied Cryptography, Data Science & Machine Learning

**EXPERIENCE**

**Claremont McKenna College, Claremont, CA May 2023 – Present**

*AI Researcher*

* Enhanced LLMs' proficiency in Latin using strategic fine-tuning and an optimized, low-resource dataset
* Fine-tuned Davinci and LLaMA using an 80,017-token Latin textbook, conserving computational resources
* Increased zero-shot & few-shot accuracy for latin learning by ~25%

**CellectGen Inc, Pasadena, CA June 2023 – Present**

*Software Engineer*

* Led software engineering team to create computer-vision app for rapid identification of periodontal disease
* Applied Dart, Python, OpenCV, and MATLAB for app deployment

*Data Analyst*

* Conducted value-based pricing strategies using competitive analysis and demand forecasting
* Employed Python, R, SQL, ARCGis, and Microsoft Office for in-depth data analysis

**Pence Wealth Management, Newport Beach, CA May 2022 – Dec 2023**

*Financial Data Analyst*

* Conducted real-time data and financial research on oil & gas, automotive, and semiconductor industries
* Formulated stock pitches with investment team; successfully pitched ASML, TSM, XOM, & F to CIO
* Gained technical experience with Bloomberg Terminal, Microsoft Excel, Scala, Python, and R

**Athena Network (Harvey Mudd College), Claremont, CA Oct 2021 – Dec 2022**

*Founder*

* Mobile-based college app that provides students with a one-stop shop for all college resources
* Led team of four in formulating mobile app concept, business model, and software production
* Collaborated with The Claremont Colleges and 40 local businesses, amassing over 800 active users

**LEADERSHIP & ACTIVITIES**

Campus Director, Biggabed LLC, The Claremont Consortium **2023 – Present**

Associate, Randall Lewis Center for Innovation & Entrepreneurship, Claremont McKenna College **2022 – Present**

Closing Pitcher, NCAA CMS Baseball, Claremont-Mudd-Scripps Athletics **2021 – Present**

**SKILLS & INTERESTS**

* **Technical**: Proficient in Python, R, SQL, Shell, Dart, HTML/CSS, Vim, & LaTeX; Proficient in Microsoft Office and Google Suite apps; Bloomberg Terminal, React Native, Flutter, Adobe Premiere, & ARCGis.
* **Interests**: Poker probability, Chess, Drummer/DJ (EDM), Playlist Curator, Web Development