

# DANIEL SURYAKUSUMA

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## EDUCATION

University of California, Berkeley | Berkeley, CA  
B.A. Applied Mathematics | May 2020  
Major GPA: 3.46/4.00

University of California, Berkeley – Extension | Berkeley, CA  
C.P. Certificate Program in Paralegal Studies | Awarded Jan 2017

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## ACTUARIAL EXAMS

Exam P/1: Passed | Jul 2017  
Exam FM/2: Passed | Oct 2017  
Exam IFM/3: Sitting | Mar 2020

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## TECHNICAL SKILLS

MS Excel {advanced} + VBA {experienced} | SQL {experienced} : MySQL / PostgreSQL / MS Access  
R : RStudio {advanced} | Python {experienced} | MATLAB {advanced} | Web : {experienced} JS / HTML / CSS | LaTeX {advanced}

## TECHNICAL PROJECTS

**Insuring Against Going Viral: Life Expectancy on Spotify Top Charts** | ( [dsury.com/bohemian-rhapsody](https://dsury.com/bohemian-rhapsody) )

- Quantified interaction effect between fixed subscription premiums and royalty payment losses for viral songs
- Programmed automatic web scraping and analysis tools in R to gather, compile (> 15 million lines of data in .csv), and summarize Spotify metrics for user-specified time and region granularity
- Integrated PostgreSQL database to rapidly query data into KPI dashboard to infer up-to-date consumer behavior and trends
- Applied basic actuarial concepts (Monte Carlo, seasonality, IBNR, trend selection) to model popularity decay as well as quantify estimated loss due to royalty payments for the life of a song on Spotify Top Charts

**Livetype TeX Library (GitHub Atom, Open-Source)** | ( [dsury.com/tex](https://dsury.com/tex) )

- Built a customizable CoffeeScript (.cson) library for code completion and error correction, enabling real-time rapid typesetting of precise technical notes (math, diagrams, code) in a lecture setting with integration of GitHub Atom packages and libraries
- Currently volunteering under Berkeley Statistics professor Jim Pitman as scribe for Stochastic Processes ( [150.dsury.com](https://150.dsury.com) )

**Cal Actuarial League Case Competition: Property & Casualty, General Analytics** | ( [dsury.com/case-competition-fall-2019](https://dsury.com/case-competition-fall-2019) )

- Presented end-to-end business solution, driving a Tweedie GLM to categorize PPA driver risk classifications and form UW guidelines to optimize an insurer's risk appetite, with focus on compliance with California's Proposition 103 ratemaking regulations
- Integrated a Metropolis-Hastings Markov Chain Monte Carlo (MCMC) method for trending thin and recent loss and ALAE data

**The Infinite Actuary: Technical Skills Course** | ( [dsury.com/projects](https://dsury.com/projects) )

- Built a MS Access database for an electronics company featuring different products and brands for warranty sales and loss, and queried data to generate summary KPI dashboards in Excel
  - Constructed a simple life insurance pricing model based on IRS prescribed mortality tables and various defined benefit plans
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## PROFESSIONAL EXPERIENCE

**Berkeley Center for Law & Technology** | UC Berkeley School of Law, Berkeley, CA | Oct 2013 – May 2015

**Web Development Lead, Administrative Assistant**

- Synthesized 500+ business account data sets into relational databases, integrating Salesforce API for queries and key insights
- Tailored web solutions for Berkeley Law faculty, streamlining logistics and web communications for conferences and symposiums

**Berkeley Technology Review** | [berkeleytechreview.com](https://berkeleytechreview.com) | Sep 2014 – May 2015

**Contributing Editor, Web Developer**

- Created and published articles on privacy, copyright law, and disruptive technologies
  - Integrated elements of different web application platforms into an intuitive and reactive user interface, built from Drupal, Nodejs
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