

# Yuzhou Ge



*Undergraduate student from University of Southern California (USC)  
Bachelor of Science in both Applied Mathematics and Computer Science*

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## PROFILE

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Date of birth 09/26/1996  
Place of birth Jiangsu, China  
Citizenship Chinese  
Languages English, Mandarin Chinese

## EDUCATION

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<b>B.S., Applied and Computing Mathematics</b> Dana and David Dornsife College of Letters, Arts and Sciences, USC	Graduation: Fall 2019 Major GPA: 4.0
<b>B.S., Computer Science</b> Department of Computer Science, Viterbi School of Engineering, USC	Graduation: Fall 2019 Major GPA: 3.9
	All courses GPA: 3.79

## POSITIONS

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<b>CS104 Data Structures and Object Oriented Design</b> <i>Undergraduate Teaching Assistant (Course Producer)</i> Responsibilities include holding weekly lab sections to help students review and practice materials from lectures taught by Prof. Aaron Cote and Prof. Sandra Batista; holding weekly office hours to assist students on various assignments related to Data Structures and Object Oriented Design; grading students' assignments, exams and helping proctoring exams.	January 2018 - ongoing
<b>CS201 Principles of Software Development</b> <i>Undergraduate Teaching Assistant (Course Producer)</i> Responsibilities include answering questions posted on Piazza related to software development materials (mainly about Java and Web technologies); grading students' assignments, exams and helping proctoring exams. Course taught by Prof. Jeffery Miller.	August 2017 - December 2017

## PROJECTS & Researches

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<b>Machine learning for Favorable Wine Selection</b> <i>Individual Research Project, advised by Prof. Mikulevicius (USC Math Department)</i> <ul style="list-style-type: none"><li>• Designing two statistical models specifically for wine selection: one based on Bayesian Network and another based on Convolution Neural Networks. Functionalities including making personalized wine choosing decisions and rating a used selected wine.</li><li>• Comparing the accuracy, efficiency and economic costs between two models.</li><li>• Implement the two models into useable software products.</li></ul>	(Ongoing Project)
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## Black-Scholes PDE solver

December 2017

*Numerical Methods (Matlab, Finite Difference Method. Group of 2)*

- Implemented a Black-Scholes PDE solver using *finite differences* and *binomial tree* method with Matlab to calculate 5 month American and European put/call option price.
- Transformed the Black-Scholes Model to Heat Equation and using Heat equation solver to solve B-S Model.

## KickIt

July 2017

*Software Engineering (Java, JSP/Servlets, MySQL, AJAX, Web Socket, etc. Group Project of 3 people)*

- Developed a website that allow user to host and join favorable sport games.
- Implemented the backend using Java: sign in/ sign up features using AJAX form validation, game-filtering algorithm to match users with preferred games, multi-threading and networking implemented through Web Sockets allowing multithreaded server access and real-time updates across all clients.
- Built a efficient and powerful database for data managing with MySQL.
- Used HTML5, CSS3, Javascript and jQuery to implement clean and beautiful front-end design.

## AWARDS & HONORS

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USC Provost's Undergraduate Research Fellowship

Summer 2018

USC Dean's List

Fall 2017

## TECHNICAL SKILLS

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### Operating Systems

Mac OS X, Linux/Unix, Windows.

### Programming Languages

C/C++, Java, Python, Matlab, HTML/CSS, Javascript. (Ordered by familiarity)

### Professional Tools

Photoshop, Adobe Lightroom, Final Cut Pro, Avid Pro Tools.

## Related Coursework

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### Mathematics:

Calc I, II, III., Linear Algebra, Probability Theory, Mathematical Statistics, Numerical Methods, Math of Physics and Engineering (Complex analysis, Fourier analysis, ODE, PDE, Vector Calculus).

### Computer Science:

Convolutional Neural Networks for Visual Recognition(Stanford online course), Data Structures and Object Oriented Design, Principles of Software development, Algorithms and Theory of Computing, Computer Systems, Computer Graphics, Discrete Math from CS department.

## Personal Hobbies and Activities

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### Yuzhou Media.

Personal studio making videos and record songs for fun since high school. Welcome to take a look at my works from my home page at [yuzhoulab.com](http://yuzhoulab.com).