

# Quan Zhou

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## EDUCATION

**Princeton University**, Princeton, NJ

June 2015

**Intended Major:** B.S.E. in Mechanical and Aerospace Engineering

**Certificates in:** Robotics and Intelligent Systems, Applications of Computing, Applied Mathematics

**Half Hollow Hills High School West**, Dix Hills, NY

June 2011

Captain of Combined Swim team, Co-president of Science Olympiads, Vice-President of Matheletes, Vice-president of Academic Quizbowl Team, 10 Varsity letters from Cross Country, Swimming, and Track.

Unweight GPA: 96.42; Weight GPA: 97.83; SAT Superscore: 2330; ACT with Writing: 35

## WORK EXPERIENCE

***"On the Efficacy of Burst-Coast Motion"* [Computational Fluids]**

**Princeton, NJ Summer 2013**

- Opened new grounds in research in biomechanical transportation. Empirically demonstrated that the burst-coast mode swimming of fish is twice as efficient as the continuous swimming mode due to unsteady vortices dynamics. Implemented a boundary element solver on a 2-D thin plate in an inviscid solution. Augmented existing code with several of my own time optimizations.

**Ivy Insiders Summer Management Program (Branch Manager)**

**Dix Hills, NY Summer 2012**

- Spearheaded business development in Dix Hills for California based SAT preparatory agency revolution prep. Generated \$4,000 in raw revenue for the branch in the first two months. Produced an average increase of 300 in SAT scores for clients. Strategized outreach to the community and local schools. Secured successor and mentored the smooth transition of business.

***"Properties of High-Mannose Oligosaccharides of the HIV Glycoprotein 120"***

**[Computational Biology]**

**Stony Brook, NY Summer 2009, 2010**

- Determined important thermodynamic properties of the sugar molecules required to mediate virus to T-cell membrane fusion. Performed near-exhaustive optimization searches over highly non-linear energy planes in the determination of complex sugar ligands conformation. Applied an unorthodox statistical search method and demonstrated its viability and weaknesses. Expedited computational time with access to supercomputing clusters.

## LEADERSHIP EXPERIENCE

**Vice President, Princeton Charter Club**

**Princeton, NJ, 2013 - present**

- Manage major social events and logistical planning life at the club, and task fellow officers at large events. Facilitate brainstorming session within the officer corps by documenting, organizing, and focusing successful ideas for social, and fundraising events. Plan, market, and coordinate recruitment events for sophomores.

**Leader, Princeton Outdoor Action**

**Princeton, NJ, 2011 - present**

- Mentor and role model for a group of incoming freshman as in an intense, weeklong backpacking trip into the backcountry. Facilitate teamwork, foster personal growth, and manage conflicts within the group. Orient freshmen into a new college environment, and aid in crafting a unique identity independent of a challenging social environment.

**Public Chair and Student Conductor, Princeton University Wind Ensemble**

**Princeton, NJ, 2011 - present**

- Create and promote posters to advertise concerts to student body as publicity chair. Design, purchase, and distribute various gears such as T-shirts and sweatshirts to the membership.
- Drive the selection of fall and spring repertoires as student conductor. Rehearse, improve, and conduct one of the pieces at concert time.

**Student Manager, Rockefeller College Dining Hall**

**Princeton, NJ, 2011 - 2013**

- Train, manage, and coordinate student workers in year-round student-run operations. Troubleshoot problems as they arise and interface student efforts with the professional staff.

## SKILLS:

Proficient in: Matlab, Python, Java, LaTeX, and Photoshop

Familiar with: Perl, Unix shells, Excel, R

Web Development: HTML, CSS, Javascript