

# BRYON TJANAKA

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## EDUCATION

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**University of California, Irvine** · Irvine, CA Sept. 2017 - Jun. 2020  
B.S. Computer Science · ICS Honors · Rank: Senior

- Regents' Scholarship - merit scholarship awarded at admission for performance in high school
- Relevant courses: Machine Learning and Data Mining, Formal Languages and Automata, Computer Graphics

## EXPERIENCE

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**Intelligent Dynamics Lab** · UC Irvine (PI: Professor Roy Fox) Oct. 2019 - Present  
Undergraduate Researcher

- Design and implement novel hierarchical reinforcement learning algorithms for robotics

**Google, Inc.** · Mountain View, CA Jun. 2019 - Sept. 2019  
Software Engineering Intern

- Implemented, optimized, and evaluated multithreaded affinity clustering, a scalable clustering algorithm
- Attended workshops on performance optimization, Haskell, machine learning, and giving/receiving feedback

**Mobley Lab** · UC Irvine (PI: Professor David Mobley, Graduate Mentor: Jessica Maat) Oct. 2018 - Present  
Undergraduate Researcher

- Improve drug simulation accuracy by building a pipeline for filtering 6 million molecules
- Use greedy weighted set cover algorithm to select molecules utilizing all parameters in a force field
- Received 2 fellowships from UC Irvine Undergraduate Research Opportunities Program

**Google, Inc.** · Mountain View, CA Jun. 2018 - Sept. 2018  
Engineering Practicum Intern

- Developed a tool which evaluates Google Assistant extensions by analyzing responses to thousands of queries
- Documented this tool in Markdown to make it as easy as possible for Google Assistant reviewers to use

## LEADERSHIP & SERVICE

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**Association for Computing Machinery (ACM), UC Irvine Chapter** Sept. 2017 - Present  
Internal Vice President, Competitor

- Collaborate in teams of three to solve algorithm problems in various programming contests
- Train other students to compete by organizing events such as a series of 3 campuswide competitions
- Ranked 7<sup>th</sup>/88 at ACM ICPC 2019 SoCal Regional & 39<sup>th</sup>/4103 in world, 4<sup>th</sup>/202 in US at IEEEExtreme 13.0

**Google Girl-Powered VEX Robotics Workshop** · Mountain View, CA Jul. 2017, Aug. 2018, Jun. 2019  
Speaker, Volunteer

- Introduced hundreds of middle school girls to VEX Robotics by helping them build and program their first robot

## PROJECTS

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**Databases and Web Apps Course Project: Fabflix** Mar. 2019 - Jun. 2019

- Built an online movie service with MySQL database, Java back-end, and HTML/CSS/JS front-end

**HackUCI V Hackathon Project: Safeline** Feb. 2019

- Used Python, OpenCV, and a Raspberry Pi camera to detect people falling down and send alerts to iPhone
- Best Entrepreneurial Hack award

## SKILLS

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**Languages:** C++, C, Python, JavaScript, Java, Haskell, HTML, CSS, Markdown, Latex, SQL, Bash

**Libraries and Frameworks:** PyTorch, TensorFlow, NumPy, Matplotlib, pytest, Google Test, React.js, Jekyll

**Tools:** Vim, tmux, Visual Studio Code, Git, Linux commands, Google Suite, Inkscape

**Natural Languages:** English (fluent), Mandarin (proficient)

## ADDITIONAL INFORMATION

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**Champion of 2017 VEX Robotics High School World Championship** · **Speedcuber** (solve Rubik's cube in <1 min)

**Member of 2020 UCI Homecoming Court** · **Occasional Graphic Designer** ([btjanaka.net](http://btjanaka.net))