

# Nicolas Chan

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## Education

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**University of California, Berkeley**, Berkeley, CA

Expected Graduation: May 2021; Computer Science & Mathematics Double Major; 3.95 Unweighted GPA

- *Edward Kraft Award* (2017-18) for 4.0 GPA in first semester
- *Selected Coursework*: Structure and Interpretation of Computer Programs (A+), Great Ideas in Computer Architecture (A+), Computer Security (A), Efficient Algorithms and Intractable Problems (A)

## Skills

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- *Programming Language Experience*: JavaScript/Typescript, Java, Python, SQL, C, Go, Rust, Haskell, Bash
- *Tools*: Docker/Singularity, Linux system administration/command line, Git

## Work Experience

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**Operations Intern at Berkeley Research Computing** (September 2017 – Present) (increased hours during Summer 2019)

Berkeley Research Computing, University of California, Berkeley, Berkeley, CA

- Assisting and consulting with researchers using the Savio supercomputer (UC Berkeley institutional cluster), in close affiliation with the Lawrence Berkeley National Lab high performance computing services team
- Developing research workflows and tools for managing and analyzing cluster usage
- Published and presented work on cluster usage analysis at the PEARC19 conference (see “Publications” below)

**Intern at NASA Ames Research Center** (Summer 2018)

Stinger Ghaffarian Technologies, Inc., NASA Ames Research Center, Moffett Field, CA

- Developing Node.js-based IRC bot to provide a command-line-like interface to aggregate and provide access to data that supports bandwidth constrained airborne science missions
- Adding new services to the Mission Tools Suite Java Tomcat API, fixing bugs, optimizing Postgres database queries, and improving the Jenkins build system (using Docker)

**Intern in Educational Associates Program at NASA Ames Research Center** (Summer 2015)

Universities Space Research Association, NASA Ames Research Center, Moffett Field, CA

- Helping with Winter Weather Dashboard user interface design for airline dispatchers (user-centered design)
- Unit testing the Mission Tools Suite Java Tomcat API for planning airborne science missions

## Publications

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- Nicolas Chan. 2019. A Resource Utilization Analytics Platform Using Grafana and Telegraf for the Savio Supercluster. In *Proceedings of the Practice and Experience in Advanced Research Computing on Rise of the Machines (learning)* (PEARC '19). ACM, New York, NY, USA, Article 31, 6 pages. DOI: <https://doi.org/10.1145/3332186.3333053>

## Volunteer Work

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**Academic Intern**, UC Berkeley: CS61C: Great Ideas in Computer Architecture (Summer 2019)

- Assist students with labs by answering questions and performing lab checkoffs

## Awards

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**1st Award, Physical Science and Engineering Category**

*Synopsys Silicon Valley Science and Technology Championship* (April 2017)

*Project Title*: Evaluating and Developing Algorithms for Computer Music Composition

- (Java) Investigated using a genetic algorithm to compose musical melodies based on certain criteria

## Selected Projects

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- All projects on GitHub: <https://github.com/nicolaschan>

**bell.plus** (nicolaschan/bell) – *Lead Developer, Personal Project*

- Bell countdown website for high schools, usually receiving over 3,000 hits on a regular school day
- Written in JavaScript and TypeScript, using Node.js for the server and Mithril.js for the client
- Developed own APIs, usage statistics collection, custom CSS, schedule entry format and parser, etc.

**mines** (nicolaschan/mines) – *Personal Project*

- Real-time multiplayer cooperative minesweeper for the web browser using Socket.io and Node.js