

# RUSSELL MILLER

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## Work Experience

- '15- **Bioinformatics Intern** at UCD, Veterinary Genetics Lab, Mammalian Ecology and Conservation Unit
- Rewrote old BASH scripts/pipelines, increasing efficiency by up to 200%
  - Helped complete new scripts, converting and analyzing genomic data

## Projects

- '15 **DarkMaze** – C++
- Creates a randomly generated 2D maze
  - Competition to write a solver in C++ using the program's movement interface functions
- '14 **Minesweeper** – C++
- Creates a randomly generated puzzle
  - Competition to program a solver in C++ using functions that mimic the usual mouse interface
- '14 **Nonogram** – C++
- Created a nonogram puzzle generator, simple solver, and solution checker
  - Input & output are text files, allowing solver implementation in any language
- '11-12 **DungeonAdventure** – Java
- 2D grid based game w/ heroes, monsters, and equipment
  - First large object oriented program, used graphics and user interfaces, like buttons, listeners, and windows
- '12 **Tetris** – Java
- Implemented showing next 3 pieces, storing pieces, score, and bomb and oil special pieces
  - Used object oriented programming and APCS case study library *Gridworld*

## Education

- '12- University of California Davis (expected graduation Spring 2017)
- Computer Science and Animal Biology double major
  - GPA: 3.5 CS major GPA: 3.9

### Relevant Coursework

- |                             |                     |                           |                      |
|-----------------------------|---------------------|---------------------------|----------------------|
| • Data Structures           | • Database Systems  | • Stat Analysis Thru Comp | • Intro to Evolution |
| • Algorithm Design/Analysis | • Operating Systems | • Genetics                |                      |
| • Software Engineering      | • Bioinformatics    | • Systemic Physiology     |                      |

## Skills

### Languages

- Experienced with: C++, C, Java, Git, BASH, UNIX
- Briefly worked with: Swift, Obj-C, Perl, SQL, MatLab, R
- Foreign: Japanese (somewhat)

## Other Experience

- '14-15 **Davis Computer Science Club Officer** – Pragmatic Programming Committee Chair
- Led Tutorials in GDB debugging and Git – 4 workshops, total ~100 people
  - Led Competitions
    - Minesweeper – create program to solve as much as possible of puzzle
    - DarkMaze – create program to navigate a 2D maze
- '13-15 **CS Club Tutor**
- Tutored and helped lead review sessions for 3 CS courses a few hrs/week in spare time
  - Helped CS Club committee tutors with how to best help people learn
- '05-11 **Boyscout, Troop 764** – Eagle Scout rank