

Alex Saalberg

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Mission Viejo, CA

EDUCATION

California Polytechnic State University - San Luis Obispo, CA

June 2018

Bachelor of Science: Computer Science, **Minor:** German

SKILLS

- ❑ **Languages:** Java, C++, C, Python, SQL
- ❑ **Tools:** Windows, macOS, Linux | Xcode, Tmux, Vim, GDB, Git

SOFTWARE PROJECTS

- | | | |
|---|---------------------|------|
| Tmux-Notepane | Python, Bash | 2018 |
| <ul style="list-style-type: none">❑ Created a plugin for tmux (terminal multiplexer) using libtmux (python library)❑ “Hit a binding to open a personal note-file based on the current terminal program” | | |
| Remote-File-Copy | C, UDP | 2018 |
| <ul style="list-style-type: none">❑ Released 2 program server/client project for downloading files remotely.❑ Designed custom layer 4 protocol for transmitting data using POSIX Sockets❑ Implemented error-control (ARQ) for reliable data transmission over UDP | | |
| Base-ic Data | Scala, Spark, MySQL | 2017 |
| <ul style="list-style-type: none">❑ Analyzed effect of MLB pitch type on hitter performance using distributed computing | | |
| ARM Emulator | C, ASM(ARM) | 2016 |
| <ul style="list-style-type: none">❑ Implemented logic of ARM Thumb-Mode assembly instructions for virtual machine | | |

GAME PROJECTS

- | | | |
|---|------------------------------|------|
| Game of Stones | C++, GLSL, CMAKE | 2018 |
| <ul style="list-style-type: none">❑ Released a 3D Voxel-Terrain, “Colony Management” video game prototype❑ Created a custom OpenGL ‘Voxel’ Engine using PolyVox and BulletPhysics libraries | | |
| Helico-opter | C++, GLSL, CMAKE | 2018 |
| <ul style="list-style-type: none">❑ Released a co-operative side-scrolling ‘arcade’ video game❑ Collaborated on a 6 person graphics project over the course of 10 weeks❑ Designed a custom 3D C++ OpenGL Engine using GLFW and GLAD❑ Implemented a semi-fixed timestep with implicit euler integration and interpolation | | |
| Dead Giveaway | Java, Jswing, Junit, Mockito | 2016 |
| <ul style="list-style-type: none">❑ Released a turn-based networked card game (rules based on Clue the Card Game)❑ Managed a 6 person software engineering team for 6-months❑ Developed a GUI using Java Swing, and a network protocol using Java.net❑ Contributed to full unit test coverage using the JUnit and Mockito frameworks | | |

EXPERIENCE

World Elite Gymnastics – Rancho Santa Margarita, CA

2010–2013

Front Desk / Computer Support

- ❑ Advised and enrolled hundreds of clients into gymnastic courses
- ❑ Maintained computer systems required for daily business operations