Nick Kisel

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Education

University of California, Berkeley (GPA: 3.82) *August 2018 - May 2022*
Bachelor of Arts, Computer Science *Berkeley, California*

Data Structures, Algorithms, Machine Architecture, Operating Systems, Software Engineering, Security, Databases.
Linear Algebra, Discrete Mathematics & Probability Theory.
Principles & Techniques of Data Science, Adaptive Teaching Methods in Computer Science.

Experience

Snackpass (TypeScript, Java, Objective C, React, MongoDB) *August 2020 - January 2021*
Software Engineer Intern *San Francisco, California*

Designed intuitive kiosk and point-of-sale apps to receive orders & print receipts; deployed to 300+ restaurants.
Add user engagement features, card integrations, group orders & referrals.

Aruba Networks (C, Python, Jenkins) *May 2020 - August 2020*
Embedded Software Engineer Intern *Roseville, California*

Designed reusable logging infrastructure for debugging customers' connectivity issues on network switches.
Merged efficiency and stability improvements, eliminating *up to 50% memory usage* for multithreaded processes.
Remotely interacted with physical, on-site hardware by reserving machines and installing new builds via shell.

Projects

https://nkisel.github.io/web/

Gitlet (Java, Python)
Add, remove, commit, push, fetch, and pull different versions of files and maintain branches just like with Git.
Files are uniquely identified by SHA-1 hashing and serialized in a hidden directory.

PintOS (C)
Designed system calls, priority scheduling & filesystem operations, allowing multiple processes to share resources.
Organized design meetings, pair programming sessions, style & submission guidelines for four devs.

Mandelbrot Fractal Viewer (C)
Generates a video of a linear zoom between two magnifications of the Mandelbrot fractal.
Calculates the number of Mandelbrot iterations for a grid of points and maps each point to a color.
Customizable to arbitrary resolution, framerate, video length, color, and zoom level.

Tablut (Java, HTML)
Norse attack-and-defense board game, complete with AI for solo play & GUI for two-player games.
AI follows the minimax algorithm with alpha-beta pruning for fast & intelligent decision-making.

Enigma Machine (Java)
Expands the capabilities of the World War II era message encryption device with a rotating cipher.
Sets up a machine with any alphabet, any number and order of user-defined rotors, and (en/de)codes!

Scheme Interpreter (Python, Scheme)
Python application that tokenizes Scheme syntax and operators to evaluate functional expressions.
Implemented tail-call optimization, improving memory use and recursion capabilities.

Seven-Star (Node, React)
Image sharing social media website complete with post feedback & profile customization.

Skills

Python, Java, C, x86/RISC Assembly, HTML, CSS, TypeScript, Node, React, PostgreSQL, MongoDB.
Experience using Git, Jenkins; working via Unix shell, writing unit & integration tests, debugging.
Interests: Music & video production, guitar, weightlifting, hiking, travelling, learning new languages.