Pascal Sturmfels

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Education

April 2018 — BSE in Computer Science, **University of Michigan, Ann Arbor**
Course Work: Data Structures and Algorithms, Microprocessors, Computer Organization, Theory of Algorithms
Gpa: 4.00/4.00

Work Experience

Current — Secure Smartphone Communication
University of Michigan
Developing a peer-to-peer, censorship resistant micro-blogging app for iOS. Designing a protocol to route messages in an ad-hoc network, and promote coverage of highly rated messages. Implementing a message-authentication algorithm to verify the integrity and ownership of messages.

Summer 2016 — Computer Scheduling and Optimization
University of Maryland
Improved the approximation bounds of existing algorithms for scheduling in the online concurrent open shop model and the online coflow model. Implemented modern algorithms for coflow scheduling on randomized bipartite graphs to compare heuristic methods.

May 2016 – July 2015 — Computational Biology
University of California, Berkeley
Developed data visualization tools for next-generation sequencing software. Reduced storage size of genomic datasets by an order of magnitude. Designed lair.berkeley.edu, a website containing a database of analyses from published genomic papers, and corresponding back-end to analyze published papers automatically.

Personal Work

Current — iPhone Game Development
I'm solo-developing an iPhone game, Avalanche, using Swift and SpriteKit. I plan to integrate Apple's Game Center framework to track user progress, and simulate fluid physics for more involved gameplay.

Current — Director of Technology at $K\Theta\Pi$
I'm the director of technology for the professional informatics fraternity Kappa Theta Pi. My responsibilities include managing a team to design the front and back of our website, hosting public tech workshops every semester, and acting as a consultant for our member's technology projects.

Publications

[1] Harold Pimentel et al. "The Lair: A resource for exploratory analysis of published RNA-Seq data". In: *bioRxiv* (2016). DOI: 10.1101/056200.