

Pascal Sturfels

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EDUCATION

APRIL 2018 BSE in Computer Science, **University of Michigan, Ann Arbor**
COURSE WORK: Natural Language Processing, Machine Learning, Data Structures and Algorithms, Design and Analysis of Algorithms, Microprocessors
GPA: 4.00/4.00

WORK EXPERIENCE

JANUARY 2016 – DECEMBER 2016 | 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 | Director of Technology at $K\Theta\Pi$
Executive board member of the professional technology fraternity Kappa Theta Pi. Responsibilities include managing a team to design the front and back of kappathetapi.com and hosting public technology workshops every semester.

Current | iPhone Game Development
Solo-developing an iPhone game, Avalanche, using Swift and SpriteKit. Integrating Game Center to track and connect users' achievements and scores. Designing interactive game scenes and sprite animations in Adobe Illustrator.

PUBLICATIONS

- [1] Harold Pimentel, Pascal Sturfels, Nicolas Bray, Páll Melsted, and Lior Pachter. "The Lair: a resource for exploratory analysis of published RNA-Seq data". In: *BMC Bioinformatics* 17.1 (2016), p. 490. ISSN: 1471-2105. DOI: [10.1186/s12859-016-1357-2](https://doi.org/10.1186/s12859-016-1357-2).