

# Adam Guo

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		<b>GitHub</b>	<a href="https://github.com/adamguos">github.com/adamguos</a>

## Skills

<b>Languages</b>	Python, Java, JavaScript, Julia, C
<b>Web/server</b>	Ruby on Rails, Node.js, Angular.js, Linux/Bash, Vagrant
<b>Compute</b>	Tensorflow, Numpy, scikit-learn, Pandas

## Education

<b>May 2018-</b>	Pomona College
<b>May 2022</b>	<i>Computer Science and Mathematics major, 4.0 GPA</i> <ul style="list-style-type: none"><li>• CS coursework: <i>Data Structures and OOP, Computer Systems</i></li><li>• Math coursework: <i>Real Analysis, Advanced Linear Algebra, Statistical Theory, Mathematics of Big Data</i></li><li>• Teaching assistant for CS department (<i>Discrete Math, Languages and Theory of Computation</i>)</li><li>• <a href="#">p-ai.org</a> member working on applied ML projects, e.g. EEG classification, facial recognition</li></ul>
<b>Honors:</b> Llewellyn Bixby Mathematics Prize (2019-20), Pomona College Scholar (18-19, 19-20)	

## Work Experience

<b>June 2019 -</b>	Claremont Graduate University Institute of Mathematical Sciences
<b>Sep 2020</b>	<i>Research Assistant (under Prof. Hrushikesh Mhaskar)</i> <ul style="list-style-type: none"><li>• Implemented novel <i>time series classification algorithm</i> using kernel methods on manifolds</li><li>• Read research papers and implemented cutting edge algorithms, such as ARMA modeling, manifold learning, signal decomposition</li><li>• Investigated <i>numerical methods</i> for computing Hermite polynomials to high precision</li><li>• Achieved state-of-the-art classification accuracy in some high-dimensional datasets</li><li>• <a href="https://github.com/adamguos/arma-grassmann-classifier">github.com/adamguos/arma-grassmann-classifier</a></li></ul> <b>Technologies:</b> Python (Tensorflow, scikit-learn), MATLAB, Julia
<b>Sep 2018 -</b>	Associated Students of Pomona College
<b>present</b>	<i>Web Developer</i> <ul style="list-style-type: none"><li>• Developed and maintained <a href="#">pomonastudents.org</a> (used by 5,000+ students) in a team of 4</li><li>• Led development of new features: rideshare portal, housing review system, WYSIWYG editor</li><li>• Employed design thinking to discuss user stories, web traffic feedback</li></ul> <b>Technologies:</b> Ruby on Rails, jQuery, HTML/CSS, PostgreSQL, Vagrant, Capistrano

## Projects

- **Geometrically unified facial recognition (under Prof. Weiqing Gu, Harvey Mudd College)**
  - Research team of 5, using differential geometry techniques to accelerate machine learning-based facial recognition
  - Performed feature extraction on facial images using *OpenCV* and *dlib*
  - Trained Gaussian mixture model in *scikit-learn* to cluster shapes as Bayesian posterior
- **CHIP8.jl**
  - Developed a fully functional [CHIP-8](#) emulator in Julia
  - Implemented graphics and input using GTK
  - [github.com/adamguos/chip8.jl](https://github.com/adamguos/chip8.jl)
- **EEG decoding and classification with recurrent neural networks**
  - Classifies EEG based on executed or imagined movements, using *Tensorflow RNN/LSTM* on *NVIDIA GPU*
  - Achieved 70% accuracy across 7 classes.
  - [github.com/adamguos/p-ai-neuro](https://github.com/adamguos/p-ai-neuro)