Shogun is an open-source machine learning platform that anyone can use to learn about ML and apply it to solve problems. Shogun provides efficient implementation of most standard ML algorithms, including state-of-the-art algorithms (among others: efficient SVM implementations, multiple kernel learning, kernel hypothesis testing and Krylov methods). All of these are supported by a collection of general purpose methods for evaluation, parameter tuning, preprocessing, serialisation and I/O.

Shogun does not re-invent the wheel, but offers bindings to other sophisticated libraries including, LibSVM/LibLinear, SVMLight, LibOCAS, libqp, VowpalWabbit, Tapkee, SLEP, GPML and more. A unified interface provides access via many popular programming languages, including C++, Python, Octave, R, Java, Lua, C#, and Ruby.

**USE CASES**

Shogun is used to teach Machine Learning course, e.g. at UCL London, at Polytechnique Paris.

Academic research in Machine Learning (50 citations in 2020)

Industry (appears in number of patents, used by predictive analytics companies)

**PLANNED FEATURES**

+ Finish Plugin architecture transition (instead of monolithic arch)
+ Run as WebAssembly/JavaScript
+ Graph based linear algebra and Automatic Differentiation
<table>
<thead>
<tr>
<th>PROJECT NEEDS</th>
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<tbody>
<tr>
<td>Specialist manpower for plugin/cmake architecture</td>
<td>200 hours</td>
</tr>
<tr>
<td>Developer advocate, to maintain and facilitate onboarding of new devs</td>
<td>10-20 hours/week</td>
</tr>
<tr>
<td>Finish, deploy and maintain new website</td>
<td>50 hours + 5 hours/month</td>
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</table>

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For more information on Shogun, including our governance structure and project roadmap, please visit https://www.shogun-toolbox.org/

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