PAPER

Computational prediction of human intronic variation

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Abstract

The Abstract (250 words maximum) should be structured to include the following details: **Background**, the context and purpose of the study; **Results**, the main findings; **Conclusions**, brief summary and potential implications. Please minimize the use of abbreviations and do not cite references in the abstract.

Key words: Keyword1; keyword 2; keyword 3 (Three to ten keywords representing the main content of the article)

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· Another point.
· A third point.

Key Points

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- This is the second point
- One last point.

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Figures and tables can be added with the usual `figure` and `table` environments, e.g. Figure 1 and Table 1. Use `figure*` and `table*` if you need a two-column wide figure or table, as in Figure 2 and Table 2.

If you have a very wide table or figure, you can use `sidewaystable` or `sidewaysfigure`, as in Table 3: this will be rotated sideways and occupy a *single column* on its own.

If your table or figure is both wide and tall (so it wouldn't fit well in a single column with `sidewaystable` or `figure`), you can use `table` or `figure` inside a `landscape` environment for a full-page landscaped alternative. A page break will be inserted *immediately before and after* the `landscape` environment (Table 4), so you'll need to carefully position it in a suitable location in your manuscript.

Some Mathematics Sample

Let $X_1, X_2, \ldots, X_n$ be a sequence of independent and identically distributed random variables with $E[X_i] = \mu$ and $Var[X_i] = \sigma^2 < \infty$,
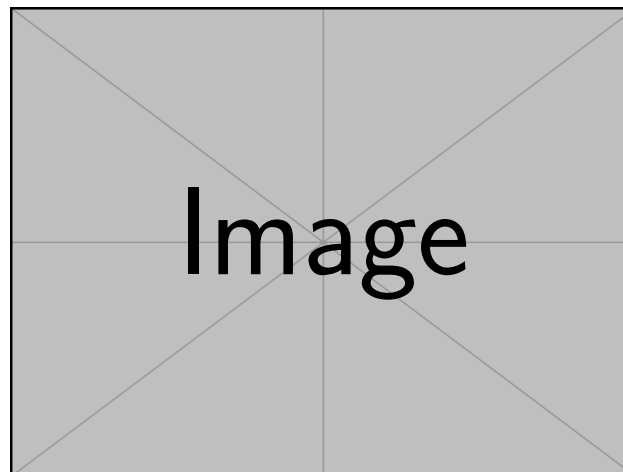

Figure 1. An example figure

Table 1. An example table.

Item	Quantity	Notes
Widgets	42	Over-supplied[*]
Gadgets	13	Under-supplied

This is a table note.
[*] Another note.

and let

$$S_n = \frac{X_1 + X_2 + \cdots + X_n}{n} = \frac{1}{n} \sum_i^n X_i \qquad (1)$$

denote their mean. Then as n approaches infinity, the random variables $\sqrt{n}(S_n - \mu)$ converge in distribution to a normal $\mathcal{N}(0, \sigma^2)$.

Background

The background section should be written in a way that is accessible to researchers without specialist knowledge in that area and must clearly state—and, if helpful, illustrate—the background to the research and its aims. The section should end with a brief statement of what is being reported in the article.

Data Description

A statement providing background and purpose for collection of these data should be presented for readers without specialist knowledge in that area. A brief description of the protocol for data collection, data curation and quality control, as well as potential uses should be included, as well as outlining how the data can be accessed if it is not deposited in our repository.

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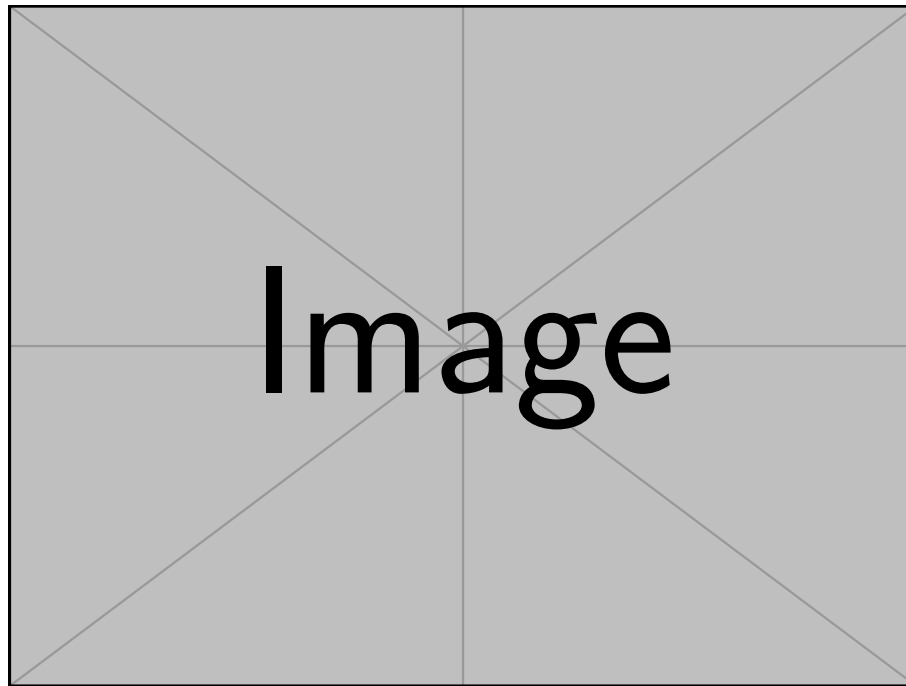
Figure 2. An example wide figure. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Table 2. Automobile land speed records (GR 5-10)

Speed (mph)	Driver	Car	Engine	Date	Extra comments
407.447	Craig Breedlove	Spirit of America	GE J47	8/5/63	(Just to demo a full-width table with auto-wrapping long lines)
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600.601	Craig Breedlove	Spirit of America, Sonic 1	GE J79	11/15/65	
622.407	Gary Gabelich	Blue Flame	Rocket	10/23/70	
633.468	Richard Noble	Thrust 2	RR RG 146	10/4/83	
763.035	Andy Green	Thrust SSC	RR Spey	10/15/97	

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Analyses

This section should provide details of all of the experiments and analyses that are required to support the conclusions of the paper. The authors should make clear the goal of each analysis and state the basic findings.

Discussion

The discussion should spell out the major conclusions and interpretations of the work, including some explanation on the importance and relevance of the dataset and analysis. It should not be restatement of the analyses done and their basic conclusions. The discussion section can end with a concluding paragraph that clearly states the main conclusions of the research along with directions for future work. Summary illustrations can be included.

Potential implications

Authors should provide some additional comments about potential, more broad-ranging implications of their work that are not directly related to the current focus of their manuscript. This section is meant to promote discussion on possible ways the findings or data presented might be used in or have a relationship with other areas of research that may not be directly apparent in the work. It is not meant to provide 'proof of importance' of the work. Only to engender expansion of use to other areas.

Explicit personal opinions by the authors are permitted, but they should be made clear as such. References or related information to support the propositions should be included. These section should focus on work that can be done within the foreseeable future and specifically using the information within the manuscript, not provide speculation on how it will relate to far-reaching goals of the research area.

Methods

The methods section should include the design of the study, the type of materials involved, a clear description of all comparisons, and the type of analysis used, to enable replication of the work. Ease of reproducibility is one of the key criteria on which reviewers will be asked to comment, so we strongly advocate the use of the reporting checklists recommended by the BioSharing network and workflow management systems such as Galaxy and MyExperiment and container systems such as Docker, to save the details of the methods to encourage reproducibility as well as conciseness, is also strongly encouraged. Our *Giga*DB repository and GigaGalaxy server can also be used to archive data, workflows and snapshots of the code with an accompanying DOI. Our GitHub page can also be used to host a dynamic forkable version of the code if the authors have not used a code repository themselves.

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Lists the following:

- Project name: e.g. My bioinformatics project
- Project home page: e.g. `http://sourceforge.net/projects/mged`
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- Programming language: e.g. Java
- Other requirements: e.g. Java 1.3.1 or higher, Tomcat 4.0 or higher
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Table 3. Automobile land speed records (GR 5-10). This is the same table as before, but rotated sideways.

Speed (mph)	Driver	Car	Engine	Date	Extra comments
407.447	Craig Breedlove	Spirit of America	GE J47	8/5/63	(Just to demo a full-width table with auto-wrapping long lines)
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//gigadb.org/dataset/100044). For more see:

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A list of available scientific research data repositories can be found in res3data and BioSharing.

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Ethical Approval (optional)

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Table 4. Automobile land speed records (GR 5–10). This is again the same table as before, but on a landscaped page. **Note that a hard page break is inserted immediately before and after** `landscape`, so you'll need to carefully position such an environment at a suitable location in your manuscript!

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