

Artigo de trabalho de conclusão de curso GymTech

GUSTAVO MEIRA BEIJE¹, LUCAS DE MELO CARVALHO¹, MARINA GABRIELA GARCIA¹, MURILO DE ALMEIDA AMORIM MOREIRA¹, THIAGO BARRETO MENEZES¹, AND RODRIGO CERQUEIRA SIMÕES¹

¹Aluno(a) do terceiro ano do Ensino médio integrado ao curso de desenvolvimento de sistemas na ETEC de Ilha Solteira, 2023.

Compilado June 27, 2023

No âmbito da área de saúde e bem-estar, muitas pessoas enfrentam dificuldades para manter uma rotina regular de exercícios físicos, principalmente por falta de tempo e orientação adequada. Além disso, a pandemia da Covid-19 agravou essa situação, com muitas academias fechando suas portas e as pessoas tendo que buscar alternativas para manter a saúde em dia.

1. INTRODUÇÃO

A tecnologia tem transformado a maneira como nos relacionamos com diversos aspectos de nossas vidas, inclusive com nossa saúde e bem-estar. Nesse sentido, um site que oferece a criação de listas de treino personalizadas pode ser uma ferramenta valiosa para quem busca uma rotina de exercícios mais eficiente. Assim como a automação residencial pode ser gerenciada por aplicativos de celular, uma lista de treino pode ser criada e acompanhada por um site. Com a ajuda de algoritmos, o site pode criar uma lista de exercícios de acordo com as necessidades e objetivos de cada usuário. É possível selecionar o tipo de treino, a intensidade e a frequência, e até mesmo escolher a duração da sessão de treinamento. Uma das principais vantagens de utilizar um site para criar uma lista de treino personalizada é que o usuário terá acesso a uma rotina de exercícios que atenda às suas necessidades específicas. Além disso, o site pode monitorar o progresso do usuário ao longo do tempo, ajustando a rotina de acordo com os resultados obtidos. Outra vantagem é a praticidade e a conveniência oferecidas por um site de treino personalizado. Com a possibilidade de acessar a lista de exercícios de qualquer lugar e a qualquer momento, o usuário pode adaptar sua rotina de acordo com sua agenda e compromissos. Em conclusão, um site que oferece a criação de listas de treino personalizadas pode ser uma ferramenta valiosa para quem busca melhorar sua saúde e bem-estar. Com a possibilidade de criar uma rotina de exercícios de acordo com as necessidades e objetivos de cada usuário, a praticidade e a conveniência oferecidas pelo site podem incentivar uma rotina de exercícios mais eficiente e constante.

2. OBJETIVO GERAL E ESPECÍFICO

Segundo a doutora Náina Tumelero, "O objetivo geral é o elemento que resume e apresenta a ideia central do trabalho acadêmico." que no nosso projeto será desenvolver um site que ajude as pessoas a criarem uma lista de exercícios personalizada

para o treino de academia, visando facilitar e incentivar a prática regular de atividades físicas. Enquanto o objetivo específico, "[...]descrevem os resultados que se pretende alcançar a partir da pesquisa. Por isso, são sempre descritos no plural. Eles são o "como" da sua pesquisa e o detalhamento do objetivo geral."

3. METODOLOGIA

Metodologia utilizada no projeto: A metodologia a ser utilizada inclui uma pesquisa de campo para entender as principais demandas e dificuldades dos usuários, bem como uma análise da concorrência e das melhores práticas no mercado de aplicativos e sites para treinos de academia. Também será realizada uma etapa de prototipação e testes com usuários para aperfeiçoar a plataforma antes do lançamento. No projeto utilizaremos diversas linguagens e programas para nos ajudar, como linguagem Visual Studio Code, que como a própria Microsoft(2018) o descreve, "o Visual Studio Code é um editor de código-fonte leve, mas poderoso, executado em sua área de trabalho e disponível para Windows, macOS e Linux.", será utilizado para programarmos e compilarmos nossos códigos, que serão escritos em Html 5, CSS, PHP e SQL

Figures and Tables should be labelled and referenced in the standard way using the `\label{}` and `\ref{}` commands.

A. Sample Figure

Figure 1 shows an example figure.

4. SAMPLE EQUATION

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

$$S_n = \frac{X_1 + X_2 + \dots + X_n}{n} = \frac{1}{n} \sum_{i=1}^n X_i \quad (1)$$

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

5. SAMPLE ALGORITHM

Algorithms can be included using the commands as shown in algorithm 1.

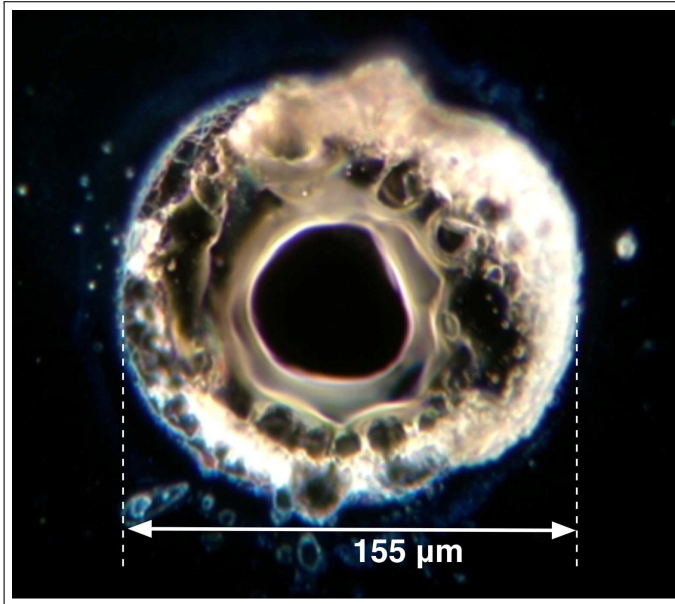


Fig. 1. Dark-field image of a point absorber.

Algorithm 1. Euclid's algorithm

```

1: procedure EUCLID( $a, b$ )           ▷ The g.c.d. of  $a$  and  $b$ 
2:    $r \leftarrow a \bmod b$ 
3:   while  $r \neq 0$  do             ▷ We have the answer if  $r$  is 0
4:      $a \leftarrow b$ 
5:      $b \leftarrow r$ 
6:      $r \leftarrow a \bmod b$ 
7:   return  $b$                      ▷ The gcd is  $b$ 

```

A. Supplementary materials in Optica Publishing Group journals

Optica Publishing Group journals allow authors to include supplementary materials as integral parts of a manuscript. Such materials are subject to peer-review procedures along with the rest of the paper and should be uploaded and described using the Prism manuscript system. Please refer to the [Author Guidelines for Supplementary Materials in Optica Publishing Group Journals](#) for more detailed instructions on labeling supplementary materials and your manuscript. For preprints submitted to Optica Open a link to supplemental material should be included in the submission, but do not upload the material.

Authors may also include Supplemental Documents (PDF documents with expanded descriptions or methods) with the primary manuscript. At this time, supplemental PDF files are not accepted for JOCN or PRJ. To reference the supplementary document, the statement "See Supplement 1 for supporting content." should appear at the bottom of the manuscript (above the References heading). Supplemental documents are not accepted for Optica Open preprints.

B. Sample Dataset Citation

1. M. Partridge, "Spectra evolution during coating," figshare (2014), <http://dx.doi.org/10.6084/m9.figshare.1004612>.

C. Sample Code Citation

2. C. Rivers, "EpiPy: Python tools for epidemiology," Figshare (2014) [retrieved 13 May 2015],

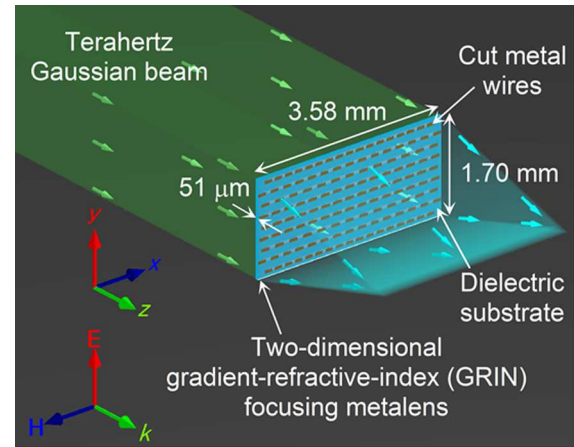


Fig. 2. Terahertz focusing metalens.

<http://dx.doi.org/10.6084/m9.figshare.1005064>.

6. BACKMATTER

Backmatter sections should be listed in the order Funding/Acknowledgment/Disclosures/Data Availability Statement/Supplemental Document section. An example of backmatter with each of these sections included is shown below.

Funding. Content in the funding section will be generated entirely from details submitted to Prism. Authors may add placeholder text in the manuscript to assess length, but any text added to this section in the manuscript will be replaced during production and will display official funder names along with any grant numbers provided. If additional details about a funder are required, they may be added to the Acknowledgments, even if this duplicates information in the funding section. See the example below in Acknowledgements. For preprint submissions, please include funder names and grant numbers in the manuscript.

Acknowledgments. The section title should not follow the numbering scheme of the body of the paper. Additional information crediting individuals who contributed to the work being reported, clarifying who received funding from a particular source, or other information that does not fit the criteria for the funding block may also be included; for example, "K. Flockhart thanks the National Science Foundation for help identifying collaborators for this work."

Disclosures. Disclosures should be listed in a separate section at the end of the manuscript. List the Disclosures codes identified on the [Conflict of Interest policy page](#). If there are no disclosures, then list "The authors declare no conflicts of interest."

Here are examples of disclosures:

Disclosures. ABC: 123 Corporation (I,E,P), DEF: 456 Corporation (R,S). GHI: 789 Corporation (C).

Disclosures. The authors declare no conflicts of interest.

Data Availability Statement. A Data Availability Statement (DAS) will be required for all submissions beginning 1 March 2021. The DAS should be an unnumbered separate section titled "Data Availability" that immediately follows the Disclosures section. See the [Data Availability Statement policy page](#) for more information.

There are four common (sometimes overlapping) situations that authors should use as guidance. These are provided as minimal models, and authors should feel free to include any additional details that may be relevant.

1. When datasets are included as integral supplementary material in the paper, they must be declared (e.g., as "Dataset 1" following our

current supplementary materials policy) and cited in the DAS, and should appear in the references.

Data availability. Data underlying the results presented in this paper are available in Dataset 1, Ref. [3].

2. When datasets are cited but not submitted as integral supplementary material, they must be cited in the DAS and should appear in the references.

Data availability. Data underlying the results presented in this paper are available in Ref. [3].

3. If the data generated or analyzed as part of the research are not publicly available, that should be stated. Authors are encouraged to explain why (e.g. the data may be restricted for privacy reasons), and how the data might be obtained or accessed in the future.

Data availability. Data underlying the results presented in this paper are not publicly available at this time but may be obtained from the authors upon reasonable request.

4. If no data were generated or analyzed in the presented research, that should be stated.

Data availability. No data were generated or analyzed in the presented research.

Data availability statements are not required for preprint submissions.

Supplemental document. See Supplement 1 for supporting content.

7. REFERENCES

Note that *Optics Letters* and *Optica* short articles use an abbreviated reference style. Citations to journal articles should omit the article title and final page number; this abbreviated reference style is produced automatically when the *Optics Letters* journal option is selected in the template, if you are using a .bib file for your references.

However, full references (to aid the editor and reviewers) must be included as well on a fifth informational page that will not count against page length; again this will be produced automatically if you are using a .bib file.

Add citations manually or use BibTeX. See [1–5].

REFERENCES

1. Y. Zhang, S. Qiao, L. Sun, Q. W. Shi, W. Huang, L. Li, and Z. Yang, *Opt. Express* **22**, 11070 (2014).
2. Optica Publishing Group, “Optica,” <https://opg.optica.org>.
3. P. Forster, V. Ramaswamy, P. Artaxo, T. Bernsten, R. Betts, D. Fahey, J. Haywood, J. Lean, D. Lowe, G. Myhre, J. Nganga, R. Prinn, G. Raga, M. Schulz, and R. V. Dorland, “Changes in atmospheric constituents and in radiative forcing,” in *Climate Change 2007: The Physical Science Basis. Contribution of Working Group 1 to the Fourth assessment report of Intergovernmental Panel on Climate Change*, S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor, and H. L. Miler, eds. (Cambridge University Press, 2007).
4. R. McKay, “X-ray crystallography,” Ph.D. thesis, Princeton University (1982).
5. V. S. C. Manga Rao and S. Hughes, *Phys. Rev. B* **75** (2007).

FULL REFERENCES

1. Y. Zhang, S. Qiao, L. Sun, Q. W. Shi, W. Huang, L. Li, and Z. Yang, "Photoinduced active terahertz metamaterials with nanostructured vanadium dioxide film deposited by sol-gel method," *Opt. Express* **22**, 11070–11078 (2014).
2. Optica Publishing Group, "Optica," <https://opg.optica.org>.
3. P. Forster, V. Ramaswamy, P. Artaxo, T. Bernsten, R. Betts, D. Fahey, J. Haywood, J. Lean, D. Lowe, G. Myhre, J. Nganga, R. Prinn, G. Raga, M. Schulz, and R. V. Dorland, "Changes in atmospheric constituents and in radiative forcing," in *Climate Change 2007: The Physical Science Basis. Contribution of Working Group 1 to the Fourth assesment report of Intergovernmental Panel on Climate Change*, S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor, and H. L. Miler, eds. (Cambridge University Press, 2007).
4. R. McKay, "X-ray crystallography," Ph.D. thesis, Princeton University (1982).
5. V. S. C. Manga Rao and S. Hughes, "Single quantum-dot Purcell factor and β factor in a photonic crystal waveguide," *Phys. Rev. B* **75** (2007).