

# Resource Summary Report

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## PyMC3

RRID:SCR\_018547

Type: Tool

### Proper Citation

PyMC3 (RRID:SCR\_018547)

### Resource Information

**URL:** <https://docs.pymc.io/>

**Proper Citation:** PyMC3 (RRID:SCR\_018547)

**Description:** Software Python package for Bayesian statistical modeling and probabilistic machine learning which focuses on advanced Markov chain Monte Carlo and variational fitting algorithms. Allows model specification directly in Python code.

**Resource Type:** software toolkit, software resource

**Defining Citation:** [DOI:10.7717/peerj-cs.55](https://doi.org/10.7717/peerj-cs.55)

**Keywords:** Bayesian statistical modeling, probabilistic machine learning, advanced Markov chain Monte Carlo, variational fitting algorithm, model specification, Python code

**Availability:** Free, Freely available

**Resource Name:** PyMC3

**Resource ID:** SCR\_018547

**License:** Apache License, V2

**Record Creation Time:** 20220129T080340+0000

**Record Last Update:** 20260729T044446+0000

### Ratings and Alerts

No rating or validation information has been found for PyMC3.

No alerts have been found for PyMC3.

### Data and Source Information

## Usage and Citation Metrics

We found 64 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [PRECISE-TBI](#) .

Ooba H, et al. (2025) Relationship Between Heated Tobacco Products and Placental Abruption: A Prospective Cohort Study Using Online Questionnaire. *Journal of epidemiology and global health*, 15(1), 30.

Sedgwick R, et al. (2025) Transfer learning Bayesian optimization for competitor DNA molecule design for use in diagnostic assays. *Biotechnology and bioengineering*, 122(1), 189.

Dong L, et al. (2025) The probability of reducing hospitalization rates for bronchiolitis with epinephrine and dexamethasone: A Bayesian analysis. *PloS one*, 20(5), e0318853.

Maith O, et al. (2025) Pallidal Deep Brain Stimulation Enhances Habitual Behavior in a Neuro-Computational Basal Ganglia Model During a Reward Reversal Learning Task. *The European journal of neuroscience*, 61(9), e70130.

Le Duc W, et al. (2025) Hippocampal damage disrupts the latent decision-making processes underlying approach-avoidance conflict processing in humans. *PLoS biology*, 23(2), e3003033.

Abdelfattah OM, et al. (2025) Predicting Temporal Trends and Hospital-Level Variation in Calcium Modification Strategies Adoption in Percutaneous Coronary Intervention. *JACC. Advances*, 4(11 Pt 1), 102159.

Pai YY, et al. (2024) Angular-Momentum Transfer Mediated by a Vibronic-Bound-State. *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*, 11(2), e2304698.

Korem N, et al. (2024) Amygdala Cannabinoid 1 Receptor, Pain Response, and Emotional Numbing in Trauma-Exposed Individuals. *JAMA network open*, 7(9), e2432387.

Fukumoto Y, et al. (2024) Differential molecular mechanisms of substrate recognition by selenium methyltransferases, INMT and TPMT, in selenium detoxification and excretion. *The Journal of biological chemistry*, 300(2), 105599.

Varone L, et al. (2024) Reproductive Biology and Rearing Improvements of *Apanteles opuntiarum*, Potential Biocontrol Agent of the Argentine Cactus Moth, *Cactoblastis cactorum*. *Insects*, 15(8).

H??ner Zu Siederdisen C, et al. (2024) Nanopore sequencing enables novel detection of deuterium incorporation in DNA. *Computational and structural biotechnology journal*, 23, 3584.

Sawczuk T, et al. (2024) A Bayesian Mixture Model approach to expected possession values in rugby league. *PloS one*, 19(11), e0308222.

Abdurrah I, et al. (2024) Predicting the Length of Stay of Cardiac Patients Based on Pre-Operative Variables-Bayesian Models vs. Machine Learning Models. Healthcare (Basel, Switzerland), 12(2).

Gehmacher Q, et al. (2024) Eye movements track prioritized auditory features in selective attention to natural speech. Nature communications, 15(1), 3692.

Namikawa Y, et al. (2024) Analyzing gait data measured by wearable cyborg hybrid assistive limb during assisted walking: gait pattern clustering. Frontiers in medical technology, 6, 1448317.

Su C, et al. (2024) Deciphering lineage-relevant gene regulatory networks during endoderm formation by InPheRNo-ChIP. Briefings in bioinformatics, 25(6).

Aguirre M, et al. (2024) Effect of egg production dynamics on the functional response of two parasitoids. PloS one, 19(3), e0283916.

Sedgwick R, et al. (2024) Transfer Learning Bayesian Optimization to Design Competitor DNA Molecules for Use in Diagnostic Assays. ArXiv.

Zhang B, et al. (2023) Uncertainty Evaluation of Soil Heavy Metal(loid) Pollution and Health Risk in Hunan Province: A Geographic Detector with Monte Carlo Simulation. Toxics, 11(12).

Nanda P, et al. (2023) Calibration methods to fit parameters within complex biological models. Frontiers in applied mathematics and statistics, 9.