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**Cupcake**,  
a [Chess Engine Communication Protocol](#) compliant [open source chess engine](#) by [Dan Honeycutt](#),  
written in [Java](#), first released in  
June, 2012.

Cupcake <sup>[1]</sup>

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## Description

Cupcake's [move generator](#) is almost identical to [Bruja's](#), Dan's earlier [C++](#) program, but its speed is about half <sup>[2]</sup>. Cupcake utilizes [rotated bitboards](#) for [sliding piece attacks](#). The [Java-bitscan](#) uses the 64-bit [De Bruijn multiplication](#).

## Search

[Search](#) is [PVS](#) with [transposition table](#) inside an [iterative deepening](#) framework with [aspiration windows](#) in conjunction with [null move pruning](#), [LMR](#), and [check extensions](#).

## Evaluation

Cupcake applies a [tapered eval](#) for a smooth transition between the [game phases](#) and interpolates between the aggregated [opening](#) and [endgame](#) scores. Beside [material balance](#) of [point values](#) and [piece-square tables](#), Cupcake considers [mobility](#), [king safety](#), and [pawn structure](#) including [passed pawns](#).

## See also

- [Bruja](#)
- [Food](#)
- [Simon](#)

## Forum Posts

- [Cupcake](#) by [Dan Honeycutt](#), [CCC](#), June 11, 2012
- [Cupcake 1.1a](#) by [Dan Honeycutt](#), [CCC](#), January 07, 2013

## External Links

## Chess Engine

- [Index of /chess/engines/Jim Ablett/CUPCAKE](#) by [Jim Ablett](#), hosted by [Kirill Kryukov](#)
- [Cupcake 1.1a](#) in [CCRL 40/40](#)

## Misc

- [Cupcake from Wikipedia](#)
- [Cupcake \(disambiguation\) from Wikipedia](#)
- [Cookbook:Cupcakes - Wikibooks](#)
- [Category:Cupcakes - Wikimedia Commons](#)
- [The Aristocrats - Erotic Cakes](#), live on June 2-3, 2012, [Alvas Showroom](#), [San Pedro](#), [California](#), [YouTube](#) Video  
[Guthrie Govan](#), [Marco Minnemann](#), [Bryan Beller](#)

## References

1. [^ Chocolate Cupcakes with Raspberry Buttercream](#) by [whitney](#), February 07, 2010
2. [^ Cupcake](#) by [Dan Honeycutt](#), [CCC](#), June 11, 2012

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